

elm creek Watershed Management Commission

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September 6, 2017

Representatives
Elm Creek Watershed Management Commission
Hennepin County, MN

*The meeting packet for this meeting may be
found on the Commission's website:
<http://elmcreekwatershed.org/pages/Meetings/>*

Dear Representatives:

A **regular meeting** of the Elm Creek Watershed Management Commission will be held on **Wednesday, September 13, 2017, at 11:30 a.m.** in the Mayor's Conference Room at Maple Grove City Hall, 12800 Arbor Lakes Parkway, Maple Grove, MN.

The Commission will suspend its regular meeting at 11:30 a.m. for the purpose of conducting a **public hearing** on three proposed capital improvements: 2017-01 Fox Creek Streambank Improvement Project Phase 3, Rogers; 2017-03 Mill Pond Fishery and Habitat Restoration, Champlin; and 2017-04 Rain Garden at Independence Avenue, Champlin. The regular meeting will resume immediately after the public hearing concludes.

The **Technical Advisory Committee (TAC)** will meet at 10:00 a.m., prior to the regular meeting, to discuss the Rush Creek Headwaters Subwatershed Assessment project. As part of this conversation, the TAC will review water quality and map book data, discuss problems and issues, review and discuss tools and models strategies, and discuss public participation and input process.

Please email Beverly at bllove@jass.biz to confirm whether you or your Alternate will be attending the TAC and the regular meetings.

Thank you.

Regards,



Judie A. Anderson
Administrator
JAA:tim
Encls: Meeting Packet

cc: Alternates	HCEE	BWSR	MPCA
Joel Jamnik	Diane Spector	Met Council	DNR
TRPD	Clerks	Official Newspaper	

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elm creek

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Regular Meeting Minutes August 9, 2017

I. A regular meeting of the Elm Creek Watershed Management Commission was called to order at 11:35 a.m., Wednesday, August 9, 2017, in the Mayor's Conference Room, Maple Grove City Hall, 12800 Arbor Lakes Parkway, Maple Grove, MN, by Chairman Doug Baines.

Present were: Bill Walraven, Champlin; Sharon Meister, Corcoran; Doug Baines, Dayton; Joe Trainor, Maple Grove; Elizabeth Weir, Medina; Fred Moore, Plymouth; Kevin Jullie, Rogers; James Kujawa and Jason Swenson, Hennepin County Dept. of Environment and Energy (HCEE); Brian Vlach, Three Rivers Park District (TRPD); Jeff Weiss, Barr Engineering; and Judie Anderson, JASS.

Also present: Todd Tuominen, Champlin; Brad Martens and Kevin Mattson, Corcoran; Mark Lahtinen, Maple Grove; Ben Scharenbroich, Plymouth; Andrew Simmons, Rogers; and James Fallon and Katie Allenson, USGS.

- A. Motion by Walraven, second by Weir to approve the **revised agenda**. * *Motion carried unanimously.*
- B. Motion by Weir, second by Walraven to approve the **minutes*** of the July 12, 2017 regular meeting. *Motion carried unanimously.*
- C. Motion by Walraven, second by Jullie to approve the August **Treasurer's Report and Claims*** totaling \$40,972.53. *Motion carried unanimously.*

II. Open Forum.

- A. Martens introduced Mattson, the new Director of Public Works for the City of Corcoran.
- B. Fallon presented and update of activities occurring at the USGS as well as links to the various water monitoring reports and real-time monitoring. This information will be uploaded to the Commission website.

III. Action Items.

A. **Project Review 2017-027W Mill Pond Restoration, Champlin.*** This project proposes to restore the aquatic and riparian habitat of the Upper and Lower Mill Ponds (DNR Pulbic Waters Basin No. 061P) to improve water quality, enhance shoreland and aquatic habitat, develop a sustainable fishery, and provide public access to the lake. No Wetland Conservation Act jurisdictional impacts will occur from this project. The drawdown of the Mill Pond will begin in September 2017 and construction will begin in December 2017, with completion by October 2018. Staff reviewed the project for compliance with the Commission's wetland, floodplain, E&SC and buffer criteria. In their findings dated August 9, 2017, Staff recommended approval of this project with five conditions: a) issuance of and compliance with a DNR-issued permit; b) compliance with Army Corps of Engineers regulations; c) Staff approval of final operation and maintenance plan on forebay area at upstream end of Upper Mill Pond; d) Staff approval of contractor SWPPP design; and e) receipt of final engineer signed and dated plans. Motion by Weir, second by Walraven to approve Staff's recommendations. *Motion carried unanimously.*

B. **Project Review 2017-029 Brayburn Trails, Dayton*** This is two parcels, totaling 154 acres, located south of 117th Avenue North and one-third of a mile east of East French Lake Road. The Excelsior Group is proposing to develop the parcels into 256 units of single family homes. Staff's review is for conformance with the Commission's stormwater, erosion and sediment control, floodplain, wetland, and buffer rules. The project proposes impacts to floodplain storage with mitigation and wetland impacts. In their August 2, 2017 findings, Staff recommended approval of this project with four conditions: a) provide revisions or additional supporting documentation to satisfy the Commission's floodplain rules; b) provide final engineer-signed and dated erosion and sediment control plan that includes revisions outlined by Staff in their findings; c) resolve issues regarding the proposed volume abstraction plan relative to a vegetation plan for the re-

quired conservation areas over existing upland, location of required monumentation, and details of the proposed construction of the biofiltration areas; and d) provide details on the proposed outlets from any of the basins. Motion by Weir, second by Trainor to approve Staff's recommendations with two additional conditions: e) determine the responsible party for the operation and maintenance of the stormwater management facilities; and f) reconcile the requirements of the wetland replacement plan. *Motion carried unanimously.*

IV. Elm Creek Watershedwide TMDL.

V. Watershed Management Plan.

A. At their July meeting the Commission approved the following capital projects for funding in 2018:

		<u>Comm Share</u>
1.	Project 2017-01 Fox Creek Streambank Stabilization Project Phase 3, Rogers*	\$112,500
2.	Project 2017-03 Mill Pond Fishery and Habitat Restoration, Champlin*	\$250,000
3.	Project 2017-04 Rain Garden at Independence Avenue, Champlin*	<u>\$ 75,000</u>
		\$437,500

At that meeting the Commission also called for a **public hearing** on these projects for September 13, 2017, during the Commission's regular meeting. At the public hearing the Commission intends to proceed under the authority granted by MN Statutes, Sec. 103B.251 to certify its share of the project costs to Hennepin County for payment by a tax levy on all taxable property located within the Elm Creek watershed. A copy of the legal notice* of the hearing is included in the meeting packet.

B. **Local Plans.** Included in the meeting packet are a copy of Staff's review* of the City of Medina's 2040 Comprehensive Plan along with a copy of comments on the Medina plan from Metropolitan Council.*

VI. Education.

A. **Watershed PREP.** The educators are gearing up for the fall semester and are scheduling classes. They will be sending letters to the cities soliciting their support of the program in the schools within their boundaries.

B. **Native Plant Sales/Pledge to Plant.** WMWA has been coordinating with cities and native plant growers and is targeting a few events for sponsored native plant sales. A nursery will be at these events to sell their native plants and city or other volunteers will be available to explain the benefits of native plants and pollinators and to advertise the Pledge to Plant campaign.

C. The next **WMWA meeting** is scheduled for 8:30 a.m., Tuesday, September 12, 2017, at Plymouth City Hall. Commissioners are encouraged to attend.

D. The **Freshwater Society** is requesting watershed organizations to consider partnering with them to fund a number of programs. Motion by Baines, second by Weir to sponsor the Road Salt Symposium and the MOOS Lecture Series at \$500 each for the coming year. *Motion carried unanimously.*

VII. Grant Opportunities and Updates.

A. **Internal Phosphorus Loading Control in Fish Lake project.** The advertisement and accepting bid application period for the alum treatment closed on July 27, 2017. Only one bid was received during the application period -- from HAB Aquatic Solutions. The estimated cost for Phase 1 of the alum treatment was \$176,379. Awarding of the bid to HAB Aquatic Solutions will go before the Three Rivers Park District Board for approval on August 24, 2017. A contractor agreement* between the parties was included in the meeting packet. Motion by Moore, second by Trainor to authorize the Chair to sign the agreement on behalf of the Commission. *Motion carried unanimously.* The tentative date for the Alum Treatment is during the week of September 18.

B. **Rush Creek Headwaters Subwatershed Assessment project.** No update.

VIII. New Business.

IX. Communications.

X. Other Business.

A. Scharenbroich announced that Catherine Cesnik has been appointed as the new **Alternate Commissioner** by the City of Plymouth. Cesnik has past experience as an Environmental Protection Specialist with the US Dept. of the

Interior.

B. The following **projects** are discussed in the August Staff Report.* ("W" denotes wetland project.)

1. 2013-046 Woods of Medina, Medina.
2. 2014-015 Rogers Drive Extension, Rogers.
3. 2015-004 Kinghorn Outlet A, Rogers.
4. 2015-006 Veit Building and Parking Lot Addition, Rogers.
5. 2015-020 Strehler Estates, Corcoran.
6. 2015-030 Kiddiegarten Child Care Center, Maple Grove.
7. 2016-002 The Markets at Rush Creek, Maple Grove.
8. 2016-004 Park Place Storage Site Plans, Corcoran.
9. 2016-005W Ravinia Wetland Bank, Corcoran.
10. 2016-014 Balsam Apartments, Dayton.
11. 2016-018 Cambridge Park, Maple Grove.
12. 2016-019 Just for Kix, Medina.
13. 2016-021 Diamond View Estates, Dayton.
14. 2016-022 AutoZone, Maple Grove.
15. 2016-026 Faithbrook Church, Dayton.
16. 2016-038 AutoMotorPlex, Medina.
17. 2016-039 Fields at Meadow Ridge, Plymouth.
18. 2016-040 Kinghorn 4th Addition, Rogers.
19. 2016-047 Hy-Vee Maple Grove #1, Maple Grove.
20. 2016-052 The Woods at Rush Creek, Maple Grove.*
21. 2017-002 RDO Site Plan, Dayton.
22. 2017-004W Cartway Trail, Champlin.*
23. 2017-008 TH169 Reconstruction, Champlin.
24. 2017-010W Nichols Property, Wetland Delineation, Corcoran.
25. 2017-012 Minnesota Solar CSG19 (Highway 55), Corcoran.*
26. 2017-013W 20417 Larkin Road, Corcoran.
27. 2017-014 Laurel Creek, Rogers.*
28. 2017-016 Territorial Woods, Maple Grove
29. 2017-017 Mary Queen of Peace Catholic Church, Rogers
30. 2017-019 Medina Senior Living Community, Medina.
31. 2017-020 Northwest Greenway Trail Phase III, Plymouth.
32. 2017-021 Hindu Society of MN Staff Housing, Maple Grove.
33. 2018-022 CSAH81 and CSAH101 and 13 Intersection Improvements, Rogers.
34. 2017-023 Midwest Steel Supply, Rogers.
35. 2017-024 Lil Explorers Daycare, Rogers.*
36. 2017-025 Grading by Ground Storage, Rogers.
37. 2017-026W Gmach Wetland Delineation, Corcoran.*
38. 2017-027W Mill Pond Restoration, Champlin.
39. 2017-028W Fehn Meadows Wetland Bank, Corcoran.*
40. 2017-029 Brayburn Trails, Dayton.*
41. 2017-030 Brindle Path, Medina.
42. 2017-031 Bass Lake Crossing, Corcoran.
43. 2017-032W Rachel Development Wetland Delineation, Corcoran.
44. 2017-033W Jeff Schalo Wetland Exemption, Corcoran.*

C. Adjournment. There being no further business, motion by Weir, second by Walraven to adjourn. *Motion carried unanimously.* The meeting was adjourned at 12:52 p.m.

Respectfully submitted,



Judie A. Anderson, Recording Secretary

JAA:tim

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elm creek

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AGENDA September 13, 2017

1. Call Regular Meeting to Order.
 - a. Approve Agenda.*
2. Consent Agenda.
 - a. Minutes last Meeting.*
 - b. Treasurer's Report and Claims.**
3. Open Forum.

Suspend meeting

4. Public Hearing for Capital Improvement Projects **2017-01** Fox Creek Streambank Stabilization Project Phase 3; **2017-03** Mill Pond Fishery and Habitat Restoration Project; **2017-04** Rain Garden Project at Independence Avenue
 - a. Staff Report.*
 - b. Feasibility Reports- *available for viewing at the hearing.*
 - c. Commission discussion.
 - d. Open Public Hearing.
 - 1) Receive comments from member cities.
 - 2) Receive comments from public.
 - e. Close public hearing.
 - f. Commission discussion.
 - g. Consider Resolution 2017-02 Ordering 2017 Improvement Projects.*
 - h. Approve Cooperative Agreements* with cities of Champlin (2) and Rogers.

Resume meeting.

5. Action Items.
 - a. Project Reviews – *also see Staff Report.**
6. New Business.
7. Grant Opportunities and Updates.
 - a. Fish Lake Internal Phosphorus Loading Control.*
 - b. Rush Creek Headwaters Subwatershed Assessment.*
8. Education.
9. Elm Creek Watershed-wide TMDL.
10. Watershed Management Plan.
11. Communications.
12. Project Reviews – *also see Staff Report.**
13. Other Business.
14. Adjourn.

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A = Action item E = Enclosure provided I = Informational update available at meeting RPFI - removed pending further information R = Will be removed
 removed RP= Information will be provided in revised meeting packet..... D = Project is denied AR awaiting recordation *in meeting packet
 **available at meeting

CHAMPLIN - CORCORAN - DAYTON - MAPLE GROVE - MEDINA - PLYMOUTH - ROGERS

Project Reviews. (See Staff Report. *)						
a.					2013-046	Woods of Medina, Medina.
b.					2014-015	Rogers Drive Extension, Rogers.
c.					2015-004	Kinghorn Outlet A, Rogers.
d.				AR	2015-006	Veit Building Expansion, Rogers.
e.				AR	2015-020	Strehler Estates, Corcoran.
f.				AR	2015-030	Kiddiegarten Child Care Center, Maple Grove.
g.					2016-002	The Markets at Rush Creek, Maple Grove.
h.					2016-004	Park Storage Place, Corcoran.
i.					2016-005W	Ravinia Wetland Bank Plan, Corcoran.
j.			R	AR	2016-014	Balsam Apartments, Dayton.
k.				AR	2016-018	Cambridge Park, Maple Grove.
l.			R	AR	2016-019	Just for Kix, Medina.
m.			R	AR	2016-021	Diamond View Estates, Dayton.
n.				AR	2016-022	AutoZone, Maple Grove.
o.				AR	2016-026	Faithbrook Church, Dayton.
p.			R	AR	2016-038	AutoMotor Plex, Medina.
q.			R	AR	2016-039	The Fields at Meadow Ridge, formerly Sands Parcel, Plymouth.
r.					2016-040	Kinghorn 4th Addition, Rogers.
s.					2016-047	Hy-Vee Maple Grove #1 (Hy-Vee Maple Grove North).
t.				AR	2016-052	The Woods at Rush Creek, Maple Grove.
u.					2017-002	RDO Site Plan, Dayton.
v.	A	E			2017-004W	Cartway Trail, Champlin.
w.			R		2017-008	TH 169 Reconstruction, Champlin.
x.					2017-013W	20417 Larkin Road, Corcoran Wetland Violations, Corcoran.
y.				AR	2017-014	Laurel Creek, Rogers.
z.	A	E			2017-016	Territorial Woods, Maple Grove.
aa.				AR	2017-017	Mary Queen of Peace Catholic Church, Rogers.
ab.	A	E			2017-019	Medina Senior Living Community, Medina.
ac.			R		2017-020	Northwest Greenway Trail Phase III, Plymouth.
ad.				AR	2017-021	Hindu Society of MN Staff Housing, Maple Grove.
af.					2017-022	CSAH 81 and CSAH101 & 13 Intersection Improvements, Rogers
ag.					2017-023	Midwest Steel Supply, Rogers.
ah.					2017-024	Lil Explorers Daycare, Rogers
ai.			R		2017-025	Grading by Ground Storage, Rogers.
aj.					2017-027W	Mill Pond Restoration, Champlin.
ak.					2017-028W	Fehn Meadows Wetland Bank, Corcoran.
al.					2017-029	Brayburn Trails, Dayton.
am.					2017-030	Brindle Path, Medina.
an.					2017-031	Bass Lake Crossing, Corcoran.
ao.		E	R		2017-032W	Rachel Development Wetland Delineation, Corcoran.
ap.			R		2017-033W	Jeff Schalo Ditch Management, Corcoran.
aq.	A	E			2017-034	Plymouth Memory Care, Plymouth.
ar.					2017-035	Weston Woods of Medina PUD, Medina.
as.					2017-036	Enclave at Elm Creek, Plymouth.
at.					2017-037	Corcoran L-80 Lift Station MCES Project 808520, Corcoran.
au.					2017-038	Bass Lake Estates, Corcoran.

A = Action item E = Enclosure provided I = Informational update available at meeting RPI - removed pending further information R = Will be removed RP= Information will be provided in revised meeting packet..... D = Project is denied AR awaiting recordation *in meeting packet
 **available at meeting

CHAMPLIN - CORCORAN - DAYTON - MAPLE GROVE - MEDINA - PLYMOUTH - ROGERS



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Item 4a

To: Elm Creek Commissioners
From: Judie Anderson
Date: September 6, 2017
Subject: Public Hearing 2017 Levy

On April 12, 2017, the Elm Creek Watershed Management Commission, upon recommendation of the Technical Advisory Committee, approved a motion to move forward with a Minor Plan Amendment (MPA) to its Third Generation Watershed Management Plan to revise the Capital Improvement Program (CIP). The MPA would revise Table 4.5 of the Commission's Third Generation Plan CIP in order to add two projects, remove one project, and shift funding on four existing projects to future years. These new projects and project updates were submitted by the member cities. Following a public meeting conducted by the Commission on May 10, 2017, the Commission adopted Resolution 2017-01 Adopting a Minor Plan Amendment.

Doug Baines, representative from Dayton and Commission chair, was present at a meeting of a Committee of the Hennepin County Board on June 20, 2017, to answer questions regarding the amendment. The County Board approved the Minor Plan Amendment and adopted a 2017 maximum levy of \$437,500 for the Elm Creek Commission on June 27, 2017.

The projects for which the levy will be certified are:

Project 2017-01	Fox Creek Streambank Stabilization Project Phase 3	\$112,500
Project 2017-03	Mill Pond Fishery and Habitat Restoration	\$250,000
Project 2017-04	Rain Garden at Independence Avenue	\$ 75,000

The Commission called for a public hearing on September 14, 2017, to consider these projects. Member cities and the County have been notified and notice has been duly published.

COMMISSION ACTION

The purpose of the public hearing is to present the proposed projects and proposed financing and to take comment from the member cities and the public. The recommended order of business is as follows:

1. Suspend regular meeting
2. Staff report on projects and proposed financing
3. Commission discussion
4. Open public hearing
5. Take comments from member cities
6. Take comments from public
7. Close public hearing
8. Commission discussion
9. Consider approving Resolution 2016-02 and Cooperative Agreements with the cities of Champlin (2) and Rogers.
10. Resume regular meeting

Revisions to CIP

Description	New Revised Existing	Est Project Cost	2016	2017	2018	2019	2020- 2024
Fox Creek at Creekview Restoration Project, Rogers *	R	321,250	80,312				
Mississippi Point Park Riverbank Repair, Champlin *	E	300,000	75,000				
Elm Creek Dam Miss River Shoreline Restoration, Champlin *	E	7,001,220	187,500				
Fish Lake Alum Treatment Phase 1, Maple Grove *	N	300,000	75,000				
Rush Creek Main Stem Restoration, Maple Grove *	N	1,650,000	75,000	75,000	75,000	25,000	75,000
Fox Creek at Hyacinth Restoration Project, Rogers	E	360,000 450,000		90,000 112,500			
Fox Creek at South Pointe Restoration Project, Rogers	E	90,000		22,500		22,500	
Mill Pond Fishery & Habitat Restora	E	5,000,000		250,000			
Tree Thinning and Bank Stabilization Project	R	50,000 annually	50,000	50,000	50,000	50,000	250,000 300,000
Ranchview Wetland Restoration, Maple Grove	N	2,000,000		250,000	250,000		
Stonebridge Storm Sewer Retrofit, Maple Grove	R	200,000	50,000	50,000			
Rain Garden at Independence Avenue, Champlin	R	300,000	75,000	75,000			
Mill Pond Raingardens, Champlin	R	400,000		100,000	100,000		
Agricultural BMPs Cost Share	R	50,000 annually	50,000	50,000	50,000	50,000	100,000 150,000
Stone's Throw Wetland	R	450,000		112,500	112,500		
Rush Creek South Stem Restoration, Maple Grove	N	675,000			168,750		
Downtown Pond Expansion & Reuse, Rogers	N	406,000			101,500		
Elm Creek Stream Restoration Reach D, Plymouth	N	850,000			212,500		
Cowley-Sylvan Connection BMPs, Rogers	R	300,000			75,000		
TOTAL			492,812	437,500			

*Feasibility Report is included in meeting packet

Projects certified for 2016 ad valorem tax levy

Projects proposed to be certified for 2017 ad valorem tax levy

PROJECT DESCRIPTIONS.

1. **Project 2017-01.** The Fox Creek at Hyacinth Restoration Project (Rogers) will stabilize approximately 3,000 linear feet of streambank to reduce sediment and nutrient loading from streambank erosion and improve stream habitat for fish and other aquatic life. The total estimated cost is \$360,000. The 2018 levy funding requested by the Commission for the project is \$90,000, with the remaining amount covered by the City of Rogers. A revised estimate of the cost of this project is \$450,000, with the Commission's share being \$112,500.

Note: The initial estimate was included in the Commission's initial tax levy request to Hennepin County on April 14, 2017. The revised costs were included in the revised CIP which was approved as a Minor Plan Amendment on May 10, 2017.

2. **Project 2017-02.** The Rush Creek Main Stem Restoration Project (Maple Grove) will stabilize approximately 11,000 linear feet of streambank to reduce sediment and nutrient loading from streambank erosion and improve stream habitat for fish and other aquatic life. The total estimated cost is \$1,650,000, with the Commission share being \$300,000 (levied for in equal increments over four years). The Commission requested a 2018 levy of \$75,000, with the remaining amount covered by the City of Maple Grove. At the Commission's public meeting in May, the City of Maple Grove requested that this project be removed from the 2017 schedule.

3. **Project 2017-03.** The Mill Pond Fishery and Habitat Restoration Project (Champlin) will remove bed load in Mill Pond, improving the depth of the pond as well as winter fish habitat. The project will restore natural stream and lake aquatic species, as well as improve recreational opportunities. The total estimated cost is \$5,000,000, with the Commission's share being \$250,000. The 2018 levy funding requested by the Commission is \$250,000, with the remaining amount covered by the City of Champlin.

4. **Project 2017-04.** The Rain Garden at Independence Avenue Project (Champlin) will infiltrate stormwater from a watershed of approximately 9 acres. The rain garden will reduce total suspended sediment and phosphorus before water is discharged to Elm Creek near the Mill Pond. Reduction of pollutants is important to the proposed restoration of Mill Pond. The total estimated cost is \$300,000, with the Commission's share being \$75,000. The 2018 levy funding requested by the Commission is \$75,000, with the remaining amount covered by the City of Champlin.

STAFF RECOMMENDATION

The Technical Advisory Committee has reviewed the feasibility reports for these projects and found them to be consistent with the Commission's requirements. Staff recommends that the Commission

1. Approve the resolution that accepts the reports,
2. Order the projects,
3. Certify the Commission's share of the costs of the projects to the county levy, and
4. Approve the cooperative agreements with the cities of Champlin and Rogers.

ELM CREEK WATERSHED MANAGEMENT COMMISSION

RESOLUTION NO. 2017-02

**ORDERING 2017 IMPROVEMENT PROJECTS, DESIGNATING
MEMBERS RESPONSIBLE FOR CONSTRUCTION, AND MAKING
FINDINGS AND DESIGNATING COMMISSION COST-SHARE FUNDING**

WHEREAS, on October 14, 2015, the Elm Creek Watershed Management Commission (Commission) adopted the *Elm Creek Watershed Management Commission Third Generation Watershed Management Plan*, (hereinafter, "Plan"); and

WHEREAS, the Plan includes a Capital Improvement Program (CIP); and

WHEREAS, on May 10, 2017, the Commission adopted a Minor Plan amendment that added two projects to the CIP, removed one project from the CIP, and shifted the timing of funding of four projects currently listed on the CIP; and

WHEREAS, the Commission's Cost Share Policy, adopted April 11, 2012, specifies a county tax levy under Minn. Stat. § 103B.251 as a source of the Commission's share of funding for projects proposed in the Commission's CIP; and

WHEREAS, on July 12, 2017, the Commission received Feasibility Studies on proposed CIP projects 2017-01 Fox Creek Streambank Improvement Project Phase 3, in the City of Rogers; 2017-03 Mill Pond Fishery and Habitat Restoration, in the City of Champlin; and 2017-04 Rain Garden at Independence Avenue, in the City of Champlin, (the "Projects"); and

WHEREAS, on September 13, 2017, following published and mailed notice in accordance with the Commission's Joint Powers Agreement and Minnesota Statutes Section 103B.251, the Commission conducted a public hearing on the Projects.

NOW, THEREFORE, BE IT RESOLVED by the Board of Commissioners of the Elm Creek Watershed Management Commission as follows:

1. The Projects will be conducive to the public health and promote the general welfare and is in compliance with Minnesota Statutes Sections 103B.205 to 103B.255 (the "Act") and with the Commission's surface water management plan as adopted and amended in accordance with the Act.
2. The cost of the Projects is estimated to be \$5,750,000.
3. The Commission receives, accepts and approves the feasibility reports for the Projects, which Projects are hereby ordered.
4. Twenty-five percent of the final cost of the Projects, but not more than \$437,500, will be paid by the Commission from proceeds received from Hennepin County pursuant to Minnesota Statutes, Section 103B.251, Subd. 6, and the Commission's Joint Powers Agreement. Additional costs will be paid by the respective cities wherein the projects reside, but no costs will be charged to other

members of the Commission. The Commission understands that the County may pay such costs with taxes levied in 2017 and paid in 2018. The Administrator is directed to transmit a certified copy of this resolution to Hennepin County prior to October 1, 2017.

5. The cities wherein the projects reside are designated as the members responsible for contracting for the construction of Projects. Contracts for construction shall be let in accordance with the requirements of law applicable to said cities. The Cooperative Agreements for the Projects between the Commission and the cities of Champlin and Rogers are approved and the Chair and Administrator are authorized and directed to execute the agreements.

Adopted by the Commissioners of the Elm Creek Watershed Management Commission the thirteenth day of September, 2017.

Doug Baines, Chair

ATTEST:

Judie A. Anderson, Administrator

(NO SEAL)

**STATE OF MINNESOTA
COUNTY OF HENNEPIN**

I, Judie A. Anderson, do hereby certify that I am the custodian of the minutes of all proceedings had and held by the Board of the Elm Creek Watershed Management Commission, that I have compared the above resolution with the original passed and adopted by the Board of said Commission at a regular meeting thereof held on the thirteenth day of September, 2017, at 11:30 a.m., that the above constitutes a true and correct copy thereof, that the same has not been amended or rescinded and is in full force and effect.

IN WITNESS WHEREOF, I have hereunto placed my hand and signature this thirteenth day of September, 2017.

Judie A. Anderson
Recording Secretary

(NO SEAL)

**COOPERATIVE AGREEMENT
FOR
2017-01 FOX CREEK STREAMBANK STABILIZATION PROJECT PHASE 3**

This Agreement is made as of this ____ day of _____, 2017, by and between the Elm Creek Watershed Management Commission, a joint powers watershed management organization (hereinafter the "Commission"), and the City of Rogers, a Minnesota municipal corporation (hereinafter the "City").

WITNESSETH:

WHEREAS, the Commission has adopted the Elm Creek Watershed Management Plan as amended on May 10, 2017 (the "Plan"), a watershed management plan within the meaning of Minn. Stat., § 103B.231; and

WHEREAS, the Plan includes a capital improvement program ("CIP") that lists a number of water quality project capital improvements; and

WHEREAS, the water quality projects identified in the CIP include the Fox Creek Stabilization Project, more fully described in Attachment One to this Agreement, which is hereby made a part hereof (the "Project"); and

WHEREAS, the Plan specifies that projects in the CIP will be partially funded by a County tax levy under Minn. Stat., § 103B.251; and

WHEREAS, on September 13, 2017, the Commission adopted a resolution ordering the Project, directing that it be constructed by the City and that the Commission's share of the Project costs be certified to Hennepin County for payment in accordance with Minn. Stat., § 103B.251; and

WHEREAS, it is expected that Hennepin County will levy taxes throughout the watershed for the Project, for collection and settlement in 2018; and

WHEREAS, the City is willing to construct the Project on the terms and conditions hereinafter set forth.

NOW, THEREFORE, ON THE BASIS OF THE PREMISES AND MUTUAL COVENANTS AND AGREEMENTS HEREINAFTER SET FORTH, THE PARTIES AGREE AS FOLLOWS:

1. The Project will consist of improvements in the City as more fully described in Attachment One.
2. The City will design the Project and prepare plans and specifications for construction of the Project. Plans and specifications are subject to approval by the Commission's consulting engineer and the City of Rogers City Engineer.
3. The City will advertise for bids and award contracts in accordance with the requirements of law. The City will award the contract and supervise and administer the construction of the Project to assure that it is completed in accordance with plans and specifications. The City will

require the contractor to provide all payment and performance bonds required by law. The City will require that the Commission be named as additional insured on all liability policies required by the City of the contractor. The City will require that the contractor defend, indemnify, protect and hold harmless the Commission and the City, their agents, officers, and employees, from all claims or actions arising from performance of the work of the Project conducted by the contractor. The City will supervise the work of the contractor. However, the Commission may observe and review the work of the Project until it is completed.

4. The City will pay the contractor and all other expenses related to the construction of the Project and keep and maintain complete records of such costs incurred.
5. The Commission will secure payment from the County in accordance with Minn. Stat., § 103B.251 in the amount of one hundred and twelve thousand five hundred dollars (\$112,500). It is understood that tax settlement from the County is not expected to occur until 2018.

Out-of-pocket costs related to the Project, incurred and paid by the Commission for publication of notices, securing County tax levy, preparation of contracts, review of proposed contract documents and administration of this contract shall be repaid from funds received in the tax settlement from Hennepin County. Amounts received from the County, up to \$112,500, less reimbursement to the Commission of such expenses are available for reimbursement to the City for costs incurred by the City in the design and construction of the Project. Reimbursement to the City will be made on completion of the project and submittal of as-builts. Reimbursement to the City will be made as soon as funds are available provided a request for payment has been received from the City providing such detailed information as may be requested by the Commission to substantiate costs and expenses.

6. Reimbursement to the City will not exceed the amount received from the County, up to \$112,500, for the Project less any amounts retained by the Commission for Commission expenses. All costs of the Project incurred by the City in excess of such reimbursement, including all costs incurred in excess of estimated project costs due to unforeseen conditions or any other cause, shall be borne by the City or secured by the City from other sources.
7. All City books, records, documents, and accounting procedures related to the Project are subject to examination by the Commission.
8. The City will secure all necessary local, state, or federal permits required for the construction of the Project.
9. The project will be constructed on land owned or easements held by the City.
10. The City will have ownership of the associated improvements, and will maintain them in good operating condition in perpetuity or until such time as they are replaced with like improvements.
11. The City will defend, indemnify, protect and hold harmless the Commission and its agents, officers, and employees, from any claims arising out of the design, construction, or maintenance of the Project, including environmental claims. Nothing herein shall be deemed a waiver of the limitations of liability in Minnesota Statutes, Chapter 466.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their duly authorized officers on behalf of the parties as of the day and date first above written.

ELM CREEK WATERSHED
MANAGEMENT COMMISSION

By: _____
Its Chair

And by: _____
Its Administrator

CITY OF ROGERS

By: _____
Its Mayor

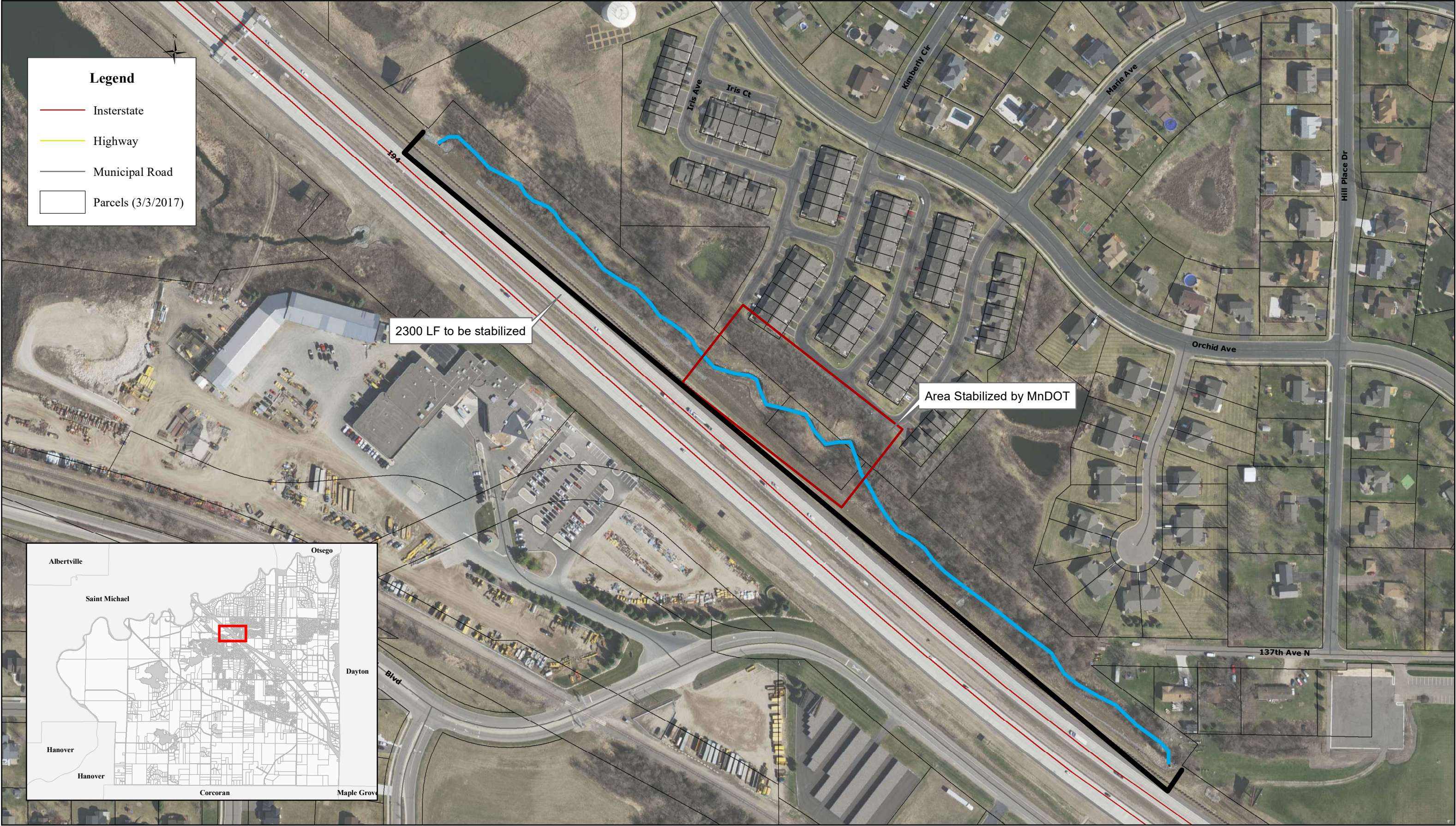
And by: _____
Its Manager

ATTACHMENT ONE

Elm Creek Watershed Management Commission
Capital Improvement Project Submittal

*(This submittal will be rated on its completeness and adherence to the goals of the Commission.
A second page may be used to provide complete responses.)*

City	Rogers	
Contact Name	Andrew Simmons City of Rogers	
Telephone	Andrew Simmons: 763-428-8580	
Email	asimmons@rogersmn.gov	
Address	City of Rogers Public Works, 22350 South Diamond Lake Road, Rogers, MN 55374	
Project Name	Fox Creek at Hyacinth Restoration	
	1. Is project in Member's CIP? (<input checked="" type="checkbox"/>) yes (<input type="checkbox"/>) no	Proposed CIP Year = 2019
	2. Has a feasibility study or an engineering report (circle one) been done for this project? (<input type="checkbox"/>) yes (<input checked="" type="checkbox"/>) no	
		Amount
	Total Estimated Project Cost	\$450,000
	Estimated Commission Share (up to 25%, not to exceed \$250,000)	\$112,500
	Other Funding Sources (name them): grants, municipal budgets	\$337,500
		\$450,000
	3. What is the scope of the project? Streambank stabilization along Fox Creek on the north side of I-94. Approximately 500 LF of the stream was stabilized during reconstruction of I-94 in 2015. This project aims to stabilize the rest of this reach of Fox Creek.	
	4. What is the purpose of the project? What water resource(s) will be impacted by the project? The purpose is to address sediment and phosphorus loading of Fox Creek.	
	5. What is the anticipated improvement that would result from the project? (Include size of area treated and projected nutrient reduction.) The project would improve Fox Creek by decreasing sediment and phosphorus loads.	
	6. How does the project contribute to achieving the goals and programs of the Commission? This project would improve water quality in Fox Creek.	
0/10	7. Does the project result from a regulatory mandate? (<input type="checkbox"/>) yes (<input checked="" type="checkbox"/>) no How?	
0/10/20	8. Does the project address one or more TMDL requirements? (<input type="checkbox"/>) yes (<input checked="" type="checkbox"/>) no Which? Fox Creek is not included in the Elm Creek Watershed TMDL.	
0/10/20	9. Does the project have an educational component? (<input type="checkbox"/>) yes (<input checked="" type="checkbox"/>) no Describe. \ (An educational component may be included after continued discussions.)	
0/10	10. Do all the LGUs responsible for sharing in the cost of the project agree to go forward with this project? (<input checked="" type="checkbox"/>) yes (<input type="checkbox"/>) no Identify the LGUs. City of Rogers	
10/20	11. Is the project in all the LGUs' CIPs? (<input checked="" type="checkbox"/>) yes (<input checked="" type="checkbox"/>) no	
1-34	(For TAC use) 12. Does project improve water quality? (0-10) 13. Prevent or correct erosion? (0-10) 14. Prevent flooding? (0-5)	15. Promote groundwater recharge? (0-3) 16. Protect and enhance fish and wildlife habitat? (0-3) 17. Improve or create water recreation facilities? (0-3)
TOTAL (poss 114)		Adopted April 11, 2012



**COOPERATIVE AGREEMENT
FOR
2017-03 MILL POND FISHERY AND HABITAT RESTORATION PROJECT**

This Agreement is made as of this ____ day of _____, 2017, by and between the Elm Creek Watershed Management Commission, a joint powers watershed management organization (hereinafter the "Commission"), and the City of Champlin, a Minnesota municipal corporation (hereinafter the "City").

WITNESSETH:

WHEREAS, the Commission has adopted the Elm Creek Watershed Management Plan as amended on May 10, 2017 (the "Plan"), a watershed management plan within the meaning of Minn. Stat., § 103B.231; and

WHEREAS, the Plan includes a capital improvement program ("CIP") that lists a number of water quality project capital improvements; and

WHEREAS, the water quality projects identified in the CIP include the Mill Pond Fishery and Habitat Restoration Project, more fully described in Attachment One to this Agreement, which is hereby made a part hereof (the "Project"); and

WHEREAS, the Plan specifies that projects in the CIP will be partially funded by a County tax levy under Minn. Stat., § 103B.251; and

WHEREAS, on September 13, 2017, the Commission adopted a resolution ordering the Project, directing that it be constructed by the City and that the Commission's share of the Project costs be certified to Hennepin County for payment in accordance with Minn. Stat., § 103B.251; and

WHEREAS, it is expected that Hennepin County will levy taxes throughout the watershed for the Project, for collection and settlement in 2018; and

WHEREAS, the City is willing to construct the Project on the terms and conditions hereinafter set forth.

NOW, THEREFORE, ON THE BASIS OF THE PREMISES AND MUTUAL COVENANTS AND AGREEMENTS HEREINAFTER SET FORTH, THE PARTIES AGREE AS FOLLOWS:

1. The Project will consist of improvements in the City as more fully described in Attachment One.
2. The City will design the Project and prepare plans and specifications for construction of the Project. Plans and specifications are subject to approval by the Commission's consulting engineer and the City of Champlin City Engineer.
3. The City will advertise for bids and award contracts in accordance with the requirements of law. The City will award the contract and supervise and administer the construction of the Project to assure that it is completed in accordance with plans and specifications. The City will

require the contractor to provide all payment and performance bonds required by law. The City will require that the Commission be named as additional insured on all liability policies required by the City of the contractor. The City will require that the contractor defend, indemnify, protect and hold harmless the Commission and the City, their agents, officers, and employees, from all claims or actions arising from performance of the work of the Project conducted by the contractor. The City will supervise the work of the contractor. However, the Commission may observe and review the work of the Project until it is completed.

4. The City will pay the contractor and all other expenses related to the construction of the Project and keep and maintain complete records of such costs incurred.
5. The Commission will secure payment from the County in accordance with Minn. Stat., § 103B.251 in the amount of two hundred and fifty thousand dollars (\$250,000). It is understood that tax settlement from the County is not expected to occur until 2018.

Out-of-pocket costs related to the Project, incurred and paid by the Commission for publication of notices, securing County tax levy, preparation of contracts, review of proposed contract documents and administration of this contract shall be repaid from funds received in the tax settlement from Hennepin County. Amounts received from the County, up to \$250,000, less reimbursement to the Commission of such expenses are available for reimbursement to the City for costs incurred by the City in the design and construction of the Project. Reimbursement to the City will be made on completion of the project and submittal of as-builts. Reimbursement to the City will be made as soon as funds are available provided a request for payment has been received from the City providing such detailed information as may be requested by the Commission to substantiate costs and expenses.

6. Reimbursement to the City will not exceed the amount received from the County, up to \$250,000, for the Project less any amounts retained by the Commission for Commission expenses. All costs of the Project incurred by the City in excess of such reimbursement, including all costs incurred in excess of estimated project costs due to unforeseen conditions or any other cause, shall be borne by the City or secured by the City from other sources.
7. All City books, records, documents, and accounting procedures related to the Project are subject to examination by the Commission.
8. The City will secure all necessary local, state, or federal permits required for the construction of the Project.
9. The project will be constructed on land owned or easements held by the City.
10. The City will have ownership of the associated improvements, and will maintain them in good operating condition in perpetuity or until such time as they are replaced with like improvements.
11. The City will defend, indemnify, protect and hold harmless the Commission and its agents, officers, and employees, from any claims arising out of the design, construction, or maintenance of the Project, including environmental claims. Nothing herein shall be deemed a waiver of the limitations of liability in Minnesota Statutes, Chapter 466.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their duly authorized officers on behalf of the parties as of the day and date first above written.

ELM CREEK WATERSHED
MANAGEMENT COMMISSION

By: _____
Its Chair

And by: _____
Its Administrator

CITY OF CHAMPLIN

By: _____
Its Mayor

And by: _____
Its Manager

ATTACHMENT ONE

Champlin Mill Pond Shoreland and Aquatic Habitat Restoration

Project Overview

The Champlin Mill Pond Shoreland and Aquatic Habitat Restoration will provide improvements for the removal of sediments and restoring the aquatic habitat utilizing a variety of habitat improvement practices to maintain and enhance game fish populations, improve nesting habitat for migratory birds and establish native vegetation. The City of Champlin has invested funding resources to complete preliminary services in 2013-2016 for the project. These services include Mill Pond sediment investigation studies, conceptual planning, hydrologic evaluations, habitat restoration conceptual plans, preliminary engineering plans and project estimates.

This project will restore twenty two acres (13,000 linear feet) of lakeshore through removal and invasive plant species, stabilization of shoreland grades, native live plant material and wetland seed planting, 2) restore fourteen acres of upland lakeshore buffers through grade stabilization and upland seed planting, 3) installation of nine acres of in-lake habitat structures for fish populations, and 4) four acres of sanctuary restoration for migratory birds and wildlife species.

The Champlin Mill Pond Shoreland and Aquatic Habitat Restoration project addresses three main objectives:

I. Restoration: Removal of sediments, restoration of lakeshore, instream structures to improve dissolved oxygen, upland buffers, in-lake fish habitat and migratory bird and wildlife sanctuary habitat to restore natural ecological function of the Mill Ponds and native diversity protected under perpetuity by the City of Champlin.

II. Monitoring and Maintenance: The City of Champlin in cooperation with project partners including the Elm Creek Watershed and MNDNR will monitor plant community diversity, fish and wildlife populations on a yearly basis to ensure abundance and diversity levels that occur within the project are recorded yearly and this data is made available to the public. All maintenance will be completed as required by the City of Champlin.

III. Education: This project will expose students and the public to a lakeshore, fish and wildlife habitat restoration project that will be sustained by the City of Champlin. The City of Champlin will provide educational outreach to students and the public. In addition the public will enjoy the recreational benefits long after the life of the grant. The restoration project will be incorporated into interpretive signage to disseminate the value and benefit of restoration project.

The City of Champlin had proposed the restoration of the Mill Pond the budgeted amount was in the amount of \$6.3M. This project will be funded through grants, watershed partnership, local

funds and MN State Bonding Funds. The City was awarded a grant in the amount of \$2M from the Environmental Trust Fund. The City and Elm Creek Watershed CIP had planned for \$750,000 and \$250,000 respectively to construct the project. The 2017 Bonding Bill, including the Mill Pond funding, was approved by the MN House and the Senate on the last day of the Legislative Session and signed into law by Governor Dayton on May 30, 2017

It is expected that the 2017 Bond Funds will be available by August 2017. First, the City will be required to enter into a Grant Agreement with the MMB. It is expected that the DNR will serve as the administrator of the 2017 Bonding Grant. The City entered into a grant agreement with the State for the ENRTF Grant in December 2016. The State Bonding would account for \$3.3M of the funding and \$2M will be funded through the grant from the Environment and Natural Resources Trust Fund. The City and Elm Creek Watershed CIP would account for \$750,000 and \$250,000 respectively.

Mill Pond Funding

- \$2,000,000 Environment and Natural Resources Trust Fund
- \$750,000 Local Funds-City of Champlin
- \$250,000 Local Funds-Elm Creek WMC
- \$3,300,000 MN Legislature (available August 2017)

Project Development

- Upper Mill Pond Mill Pond Shoreland and Aquatic Habitat Restoration
 - 2017 Bid Letting and Start Construction
 - Excavations of Silts
 - Construction Habitat and Buffers
 - Restoration of Buffers/ Native Landscape

**COOPERATIVE AGREEMENT
FOR
2017-04 RAIN GARDEN AT INDEPENDENCE AVENUE PROJECT**

This Agreement is made as of this ____ day of _____, 2017, by and between the Elm Creek Watershed Management Commission, a joint powers watershed management organization (hereinafter the "Commission"), and the City of Champlin, a Minnesota municipal corporation (hereinafter the "City").

WITNESSETH:

WHEREAS, the Commission has adopted the Elm Creek Watershed Management Plan as amended on May 10, 2017 (the "Plan"), a watershed management plan within the meaning of Minn. Stat., § 103B.231; and

WHEREAS, the Plan includes a capital improvement program ("CIP") that lists a number of water quality project capital improvements; and

WHEREAS, the water quality projects identified in the CIP include the Rain Garden at Independence Avenue Project, more fully described in Attachment One to this Agreement, which is hereby made a part hereof (the "Project"); and

WHEREAS, the Plan specifies that projects in the CIP will be partially funded by a County tax levy under Minn. Stat., § 103B.251; and

WHEREAS, on September 13, 2017, the Commission adopted a resolution ordering the Project, directing that it be constructed by the City and that the Commission's share of the Project costs be certified to Hennepin County for payment in accordance with Minn. Stat., § 103B.251; and

WHEREAS, it is expected that Hennepin County will levy taxes throughout the watershed for the Project, for collection and settlement in 2018; and

WHEREAS, the City is willing to construct the Project on the terms and conditions hereinafter set forth.

NOW, THEREFORE, ON THE BASIS OF THE PREMISES AND MUTUAL COVENANTS AND AGREEMENTS HEREINAFTER SET FORTH, THE PARTIES AGREE AS FOLLOWS:

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2. The City will design the Project and prepare plans and specifications for construction of the Project. Plans and specifications are subject to approval by the Commission's consulting engineer and the City of Champlin City Engineer.
3. The City will advertise for bids and award contracts in accordance with the requirements of law. The City will award the contract and supervise and administer the construction of the Project to assure that it is completed in accordance with plans and specifications. The City will

require the contractor to provide all payment and performance bonds required by law. The City will require that the Commission be named as additional insured on all liability policies required by the City of the contractor. The City will require that the contractor defend, indemnify, protect and hold harmless the Commission and the City, their agents, officers, and employees, from all claims or actions arising from performance of the work of the Project conducted by the contractor. The City will supervise the work of the contractor. However, the Commission may observe and review the work of the Project until it is completed.

4. The City will pay the contractor and all other expenses related to the construction of the Project and keep and maintain complete records of such costs incurred.
5. The Commission will secure payment from the County in accordance with Minn. Stat., § 103B.251 in the amount of seventy-five thousand dollars (\$75,000). It is understood that tax settlement from the County is not expected to occur until 2018.

Out-of-pocket costs related to the Project, incurred and paid by the Commission for publication of notices, securing County tax levy, preparation of contracts, review of proposed contract documents and administration of this contract shall be repaid from funds received in the tax settlement from Hennepin County. Amounts received from the County, up to \$75,000, less reimbursement to the Commission of such expenses are available for reimbursement to the City for costs incurred by the City in the design and construction of the Project. Reimbursement to the City will be made on completion of the project and submittal of as-builts. Reimbursement to the City will be made as soon as funds are available provided a request for payment has been received from the City providing such detailed information as may be requested by the Commission to substantiate costs and expenses.

6. Reimbursement to the City will not exceed the amount received from the County, up to \$75,000, for the Project less any amounts retained by the Commission for Commission expenses. All costs of the Project incurred by the City in excess of such reimbursement, including all costs incurred in excess of estimated project costs due to unforeseen conditions or any other cause, shall be borne by the City or secured by the City from other sources.
7. All City books, records, documents, and accounting procedures related to the Project are subject to examination by the Commission.
8. The City will secure all necessary local, state, or federal permits required for the construction of the Project.
9. The project will be constructed on land owned or easements held by the City.
10. The City will have ownership of the associated improvements, and will maintain them in good operating condition in perpetuity or until such time as they are replaced with like improvements.
11. The City will defend, indemnify, protect and hold harmless the Commission and its agents, officers, and employees, from any claims arising out of the design, construction, or maintenance of the Project, including environmental claims. Nothing herein shall be deemed a waiver of the limitations of liability in Minnesota Statutes, Chapter 466.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their duly authorized officers on behalf of the parties as of the day and date first above written.

ELM CREEK WATERSHED
MANAGEMENT COMMISSION

By: _____
Its Chair

And by: _____
Its Administrator

CITY OF CHAMPLIN

By: _____
Its Mayor

And by: _____
Its Manager

ATTACHMENT ONE

Independence/ Lowell Area Rain Garden and Storm Sewer Improvements

Project Overview

The areas north of the Mill Pond were constructed prior to ponding and water quality requirements for storm water runoff. City staff has identified drainage and erosion issues on Independence Avenue adjacent to the Elm Creek. The drainage area includes Reynolds Park, Trussel Avenue, Independence Avenue and Lowell Road Area. The anticipated benefits include a reduction in rate of flows to the Elm Creek and a reduction in the total phosphorous (TP) and total suspended solids (TSS) tributary to the Mill Pond. Also, the Phase I pond will serve as the compensatory storage for floodplain fill for the Cartway Road/ Elm Creek Trail Connection. The Trail/Access Road project is scheduled for construction in 2017 and requires permitting for the filling of flood plain and wetland mitigation. It is expected that this trail will also serve as a maintenance access to the west side of the Mill Pond.

Part I

The proposed work includes the repair of the Elm Creek Stream Bank at Independence Avenue and the construction of a Rain Garden/Pond at Reynolds Park. The Rain Garden/Pond will provide treatment of storm water for the park area, along with the streets and yards of the Independence Avenue/Trussel Avenue drainage area. Also, the catch basins on Trussel and Independence Avenue will be constructed with a sump and baffle to prevent sediments from reaching the Elm Creek. In the long-term, the City will reconstruct storm sewer on Trussel Avenue and Independence Avenue as part of the future street improvement projects (2021 CIP) connecting to the new rain garden/pond.

Part II

The proposed work includes the Construction of Raingarden/ ponding area near Lowell Road and Mill Pond. The Raingarden/Pond will provide treatment of storm water for the Lowell Road –Mill Pond area, along with the streets and yards that are tributary. Also, the catch basins on Lowell and Ghostly Lane will be constructed with a sump and baffle to prevent sediments from reaching the Mill Pond. In the long-term, the City will reconstruct storm sewer on Ghostly Lane and Elm Creek Avenue and Independence Avenue as part of the future street improvement projects (2021 CIP) connecting to the new rain garden/pond.

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Funding Review

Part I

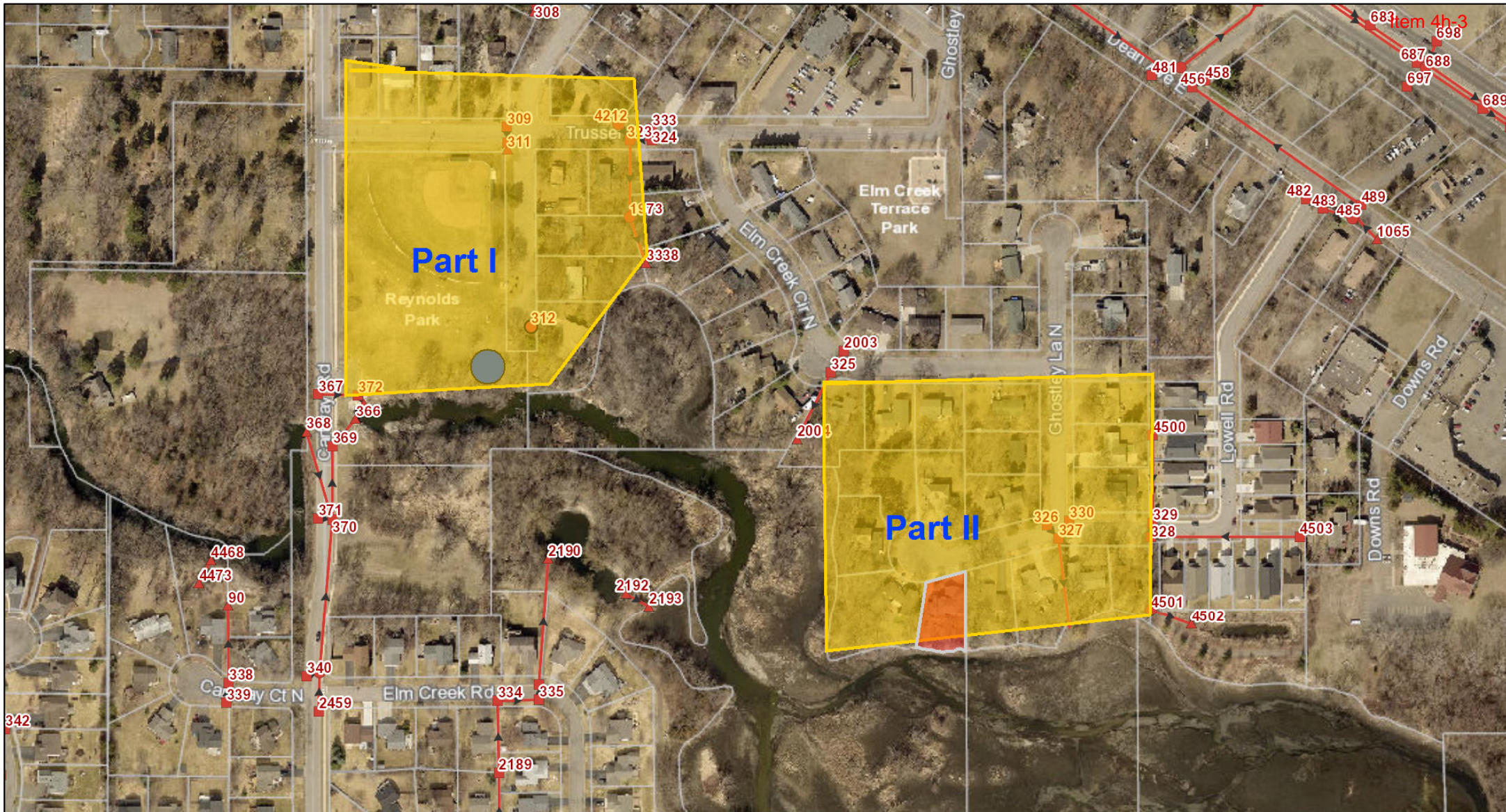
The proposed budget for the Rain Garden/Pond improvement is estimated at \$140,000. The City has identified the funding through Storm Sewer Fund 2017 CIP in the amount of \$105,000, along with a 25% cost share (\$35,000) from the Elm Creek Watershed Management Commission. This part of the improvements will be constructed in 2017.

Part II

The Storm Sewer Fund budget identifies \$160,000 for water quality improvements and a 25% cost share from the Elm Creek WMC CIP. Based on a \$125,000 project, the Elm Creek cost share would be \$40,000. This part of the project will be constructed in 2018.

Independence/ Lowell Area Raingarden/Pond Water Quality Improvements

July 11, 2017



1 inch = 376 feet



Storm Labels

Storm Points

■ CB Lead; Catch Basin

● Storm Manhole

▲ FES

■ Sump Catch Basin

● Sump Manhole

▲ Sump FES

● Other

■ Private CB Lead; Catch Basin

● Private Storm Manhole

▲ Private FES

Storm Mains

→ Storm Mains

→ Private Storm Mains



elm creek

Watershed Management Commission

ADMINISTRATIVE OFFICE
3235 Fernbrook Lane
Plymouth, MN 55447
PH: 763.553.1144
FAX: 763.553.9326
email: judie@jass.biz
www.elmcreekwatershed.org

TECHNICAL OFFICE
Hennepin County
Environment and Energy Dept
701 Fourth Ave S Suite 700
Minneapolis, MN 55415-1600
PH: 612.596.1171 | FAX: 612.348.8532
email: Ali.Durgunoglu@hennepin.us

STAFF REPORT September 6, 2017

2013-046 Woods of Medina, Medina. This is two parcels totaling 9.5 acres located east of CR 116 and south of Hackamore Road. The site is proposed to be developed into 16 single-family residential lots. On January 13, 2015, the Commission approved this project with two conditions. Although this project has not been constructed, it is still active with the City of Medina and remains approved by the Commission until it becomes inactive with the City.

2014-015 Rogers Drive Extension, Rogers. This project involves improvements along Rogers Drive from Vevea Lane to Brockton Lane. The project is located east of I-94, south of the Cabela development. The total project area is 8.0 acres; proposed impervious surfaces total 5.6 acres. Site plans received July 1, 2014 meet the requirements of the Commission with the exception of the nutrient control. Due to limited options to treat the nutrient loads on the east 1.7 acre portion of Rogers Drive, the Commission approved the site plan contingent upon the City deferring 4.6 lbs. of phosphorus for treatment in future ponding opportunities as the easterly corridor of Rogers Drive develops. 2.3 lbs. will be accounted for in the Kinghorn Spec. Building site plan with 2.3 lbs. still outstanding. This item will remain on the report until the total deferral is accounted for.

2015-004 Kinghorn Outlot A, Rogers. This is a 31 acre site located between the Clam and Fed Ex sites in Rogers on the west side of Brockton Road and I-94. The proposed site will have two warehouse buildings, 275,000 and 26,000 SF in size, with associated parking and loading facilities. The Commission standards require review of stormwater management, grading and erosion controls and buffers. In June 2015 the Commission approved this project with three conditions. Revisions have yet to meet the Commission's approval conditions. This project was extended by the City of Rogers earlier this year. It will remain active on the Staff Report.

2016-002 The Markets at Rush Creek, Maple Grove. This is a proposal to develop 40 acres of a 123-acre planned unit development located in the southwest quadrant of the intersection of CSAH 101 and CSAH 10. County Ditch 16 (Maple Creek) runs along the south property line on this project. The 40-acre project area includes a Hy-Vee grocery store (16.8 acres), a Hy-Vee gas station (2.5 acres) and 11 outlots (18.76 acres). Right-of-way accounts for 2.3 acres. The remaining acreage (83 acres) consists of 5 outlots and right-of-way. The additional outlot areas are not part of the stormwater review for this project but will be reviewed for compliance with the Commission's buffer and floodplain requirements. In May 2016 the Commission granted Staff authority to administratively approve the project and report any updates. This project has been placed on hold by Hy-Vee. As long as it remains active with the City, the Commission's approval with conditions remains in place. A temporary pipe to drain down excess water on the west side of CSAH 101 will be installed by the City of Maple Grove through this site. The permanent pipe was installed under CSAH 101 at the time the road was constructed in 2007, but it was bulk headed on both ends of the ROW. This is being completed because a new development in the northwest corner of this intersection is being considered by the City.

2016-004 Park Place Storage Site Plans, Corcoran. The applicant is developing a 22-acre site in the southwest portion of the city into a multi-unit storage facility with associated access roads, utilities, and stormwater features. This is an addition to the existing storage facility located west of the proposed project. New wetland permit revisions were approved by the Commission at their July 2016 meeting. New site plan information was received and approved by the Commission in October 2016. All approval contingencies have been met with the exception of wetland banking withdrawals for 0.24 acres from bank account #1560. The Commission has a wetland replacement escrow in case this does not occur.

RULE D - STORMWATER MANAGEMENT
RULE E - EROSION AND SEDIMENT CONTROL
RULE F - FLOODPLAIN ALTERATION

RULE G - WETLAND ALTERATION
RULE H - BRIDGE AND CULVERT CROSSINGS
RULE I - BUFFERS

Italics indicates new information

indicates enclosure

CHAMPLIN • CORCORAN • DAYTON • MAPLE GROVE • MEDINA • PLYMOUTH • ROGERS

2016-005W Ravinia Wetland Replacement Plan, Corcoran. In February 2016, Lennar Corporation submitted a Wetland Banking Concept Plan for Phase II of the Ravinia Development. This plan was withdrawn in favor of an onsite wetland replacement plan. At their December 2016 meeting the Commission approved Staff's findings and recommendations dated January 10, 2017. Final wetland impacts will be 1.22 acres. Wetland credits created on site will be 4.01 acres. *Excess credits of 0.11 acres are proposed to be used on Lennar's Laurel Creek development in Rogers (2017-014).* All contingency items that were part of Commission's approval have been met. Construction on the site began last spring. *Barr Engineering was contacted by the Commission to provide monitoring to ensure the replacement meets the performance standards of the approved plans.*

2016-040 Kinghorn 4th Addition, Rogers. This is a 13.7-acre parcel located in the northwest corner of the intersection of Brockton Lane and Rogers Drive. An industrial warehouse with 8.8 acres of new impervious area is proposed for the site. The plan includes the use of a NURP pond and a biofiltration basin to meet Commission requirements for rates, water quality and abstraction. The adjacent site is likely to be developed in the near future and some of the stormwater features were oversized to accommodate future development. In November 2016 the Commission approved the project with the following conditions: 1) approval of only this phase; future phases will need additional review and approval; 2) final modifications to the hydrologic modeling; 3) additional details are provided for a proposed water re-use system; 4) an O&M Plan for the pond and biofiltration basin is completed and recorded on the final plat; 5) modification of the storm sewer system to maximize the area draining to the NURP pond; and 6) receipt and review of wetland-related documentation if wetlands are present. Condition #1 required no action, so has been met. Condition #2 has been met for the current design; however, any future modifications to the design will require additional review. Conditions #3-6 remain outstanding and are expected to be addressed during final design.

2016-047 Hy-Vee North Maple Grove. The applicant is proposing to disturb 13 acres of a 20.4-acre site located at the northeast corner of Maple Grove Parkway and 99th Avenue for the purpose of constructing a grocery store, fuel station, convenience store and parking facilities. The applicant's engineer was present at the November meeting to request interpretation from the Commission on their 25' average and 10' minimum standard for a buffer when a retaining wall is used to minimize wetland impacts. The Commission felt there had to be some type of mitigating compensation for such a scenario. A revised plan was submitted on December 1, 2016. Staff sent preliminary review comments and requested revisions on December 14. In their findings dated January 10, 2017, Staff recommended approval of this project subject to 1) receipt, approval, and recordation of an Operations and Maintenance Plan for the pond and the iron-enhanced filtration system, 2) revisions for items relating to buffer requirements and erosion and sediment control as enumerated in the findings, and 3) receipt of a signed and dated final plan set. The Commission approved Staff's recommendations at their January 11, 2017 meeting with the additional requirement that the Commission receive and comment on a WCA impact notice. No new information has been received to date.

2017-002 RDO Dayton Site Plan. This is a commercial development proposal on a 25.6± acre plot located between I94 and Holly Lane. The project will develop the south 16 acres, to create about 7.6 acres of impervious cover. This project was approved with conditions by the Commission at their March 8, 2017 meeting. The City approved the PUD in May. The applicant has decided not to begin construction until spring 2018 and requested an extension to December 31, 2017, for the project's approval conditions set by the Commission at their March meeting.

2017-004 Cartway Trail Wetland Replacement Plan, Champlin Park and Recreation Dept. A complete application was received on June 8, 2017 and noticed per Wetland Conservation Act (WCA) requirements. An extension to the Commission's decision was granted to October 9, 2017. *The original application has been revised to conform to the WCA Technical Evaluation Panel (TEP) recommendations to further minimize impacts and provide a minimum of 1:1 replacement ratio within the Elm Creek Watershed. Impacts have been reduced from 2,172 SF to 375 SF and 2:1 mitigation will be rectified by the purchase of bank credits in Minnetrista. Updated plans also reduced floodplain impacts to 20 CY which will be replaced by the a rain garden/bio-filter basin being constructed below the floodplain elevation on the north side of the creek Staff will recommend approval of this project at the September meeting.*

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2017-008 TH169 Reconstruction, Champlin. The stormwater review was done by the West Mississippi WMO because over three-fourths of the work will be done in that watershed. This Commission's review was for floodplain impacts and mitigation. No WCA jurisdictional wetlands will be impacted by this project. At their March 2017 meeting, the Commission approved the site plans contingent upon receipt of a final signed plan set. *This project has met Commission's requirements and will be removed from the report.*

2017-013W 20417 Larkin Road, Corcoran. Staff was contacted by the DNR Conservation Officer about an unauthorized excavation in a Public Waters Inventory stream and ditching from the stream into a WCA wetland within the subject property. Staff and the DNR staff inspected the site on April 26, 2017, and confirmed the violation. The CO issued Resource Protection Notices for PWI and WCA violations to the property owner and the renter who performed the excavation. Staff also informed the city administrator. A Restoration Order was issued to the property owner by the DNR. The deadline for submittal of a replacement plan, exemption or no-loss application is July 15, 2017, or the site must be restored per the RO by that date. The landowner requested an extension to the deadline. It was granted to comply with the same deadline issued by the DNR for their RO, September 30, 2017.

2017-016 Territorial Woods, Maple Grove. This is a 21 acre site located at 13763 and 14033 Territorial Road. The north property line is Territorial Road and the south line is CR 81. The Elm Creek Park Reserve is across Territorial Road from this project. The development is proposing to construct a 98-unit apartment building and 69 townhome units. Staff review is for compliance to the Commission's rules D, E and I. *The deadline for a decision on this project was extended to September 14, 2017 by the applicant. Staff has reviewed revised plans and recommends approval contingent upon receipt of an O & M agreement meeting the Commission's rules.*

2017-019 Medina Senior Community, Medina. The applicant proposes to construct a senior living facility and medical facility on a 10.8-acre parcel located between Mohawk Drive and Willow Drive, with access from Chippewa Road. The project proposes to disturb 6.0 acres and adds 3.4 acres of new impervious surfaces. Staff is reviewing the site for compliance with rules D, E, G, and I. *Updated plans were submitted on August 28. The revised plans were in response to previous site reviews and comments from a wetland TEP meeting that resulted in reduced wetland impacts. Staff has reviewed the revised plans and will recommend the Commission approve the site subject to several conditions at their September meeting.*

2017-020 NW Greenway Trail Phase III, Plymouth. The City is proposing to construct Phase III of the Northwest Greenway Trail near Peony Lane N and Cheshire Parkway, approximately one-quarter mile south of County Road 47 in northwest Plymouth. The project consists of 1) a 2,200 foot connector trail between Kimberly Lane N and the Aspen Hollow subdivision, 2) a new 520-foot boardwalk over Elm Creek and its associated wetland/floodplain replacement, 3) a 100-foot boardwalk west of Cheshire Parkway and 4) approximately 620 linear feet of trail connections at the Cheshire Parkway trailhead adjacent to Camelot Park. The project will disturb 2.43 acres. The project is constructing 0.65 acres of new impervious surface area within the Elm Creek watershed. The new impervious surface area is a trail that ranges between eight and twelve feet wide, and has a 5-foot minimum vegetated buffer on both sides, and is, therefore, exempt from the Commission's Rule D. Staff review was for compliance to the Commission's Third Generation rules E, F and H. At their June 14, 2017 meeting, the Commission approved this project contingent upon: 1) the applicant obtaining a DNR protected waters crossing permit on Trail B and 2) LGU wetland replacement plan approval on impacts associated with the trail segments. *All approval contingencies have been met. This project will be removed from the report.*

2017-022 CSAH 81/101/13 Intersection Reconstruction, Rogers. An application was submitted by the City of Rogers for the reconstruction of the CSAH 81 and CSAH 101&13 intersection. The project will add driving and turning lanes to improve traffic flow and safety. The project will increase the impervious area at the intersection from 7.1 acres to 9.5 acres. At the July 12, 2017 meeting, the Commission approved the project with the following conditions: 1) review and administrative approval of the model revisions to more accurately depict the project immediately after construction; and 2) review and approval of the model results and design of a planned pond to be constructed to the south in association with the Justen Circle extension project. The engineer for the project has provided modeling for condition #1 and Staff is working with them to finalize administrative approval. The design for condition #2 is not yet complete.

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2017-023 Midwest Steel, Rogers. This is two existing 3 acre lots in the Rogers Industrial Park located between Highway 101 and James Avenue just north of CSAH 144 (141st Avenue). The applicant is proposing to combine the lots and construct a 53,000 SF warehouse and its associated parking. Staff reviewed the project for compliance to Commission rules D and E. There is a regional stormwater pond on this parcel that was constructed to treat 69.5 acres of water from the surrounding industrial park. This regional system was approved by the Commission in 2004 as part of project 2004-042, Highway 101 corridor drainage improvement. At their June meeting the Commission approved Staff findings dated June 9, 2017, wherein Staff recommended approval with the following conditions: 1) the remainder of the fee (\$50) is submitted to the Commission; 2) incorporation of details for pre-treatment of the two storm sewer lines draining the parking lots; 3) revision of the pipe inlets into the infiltration pond to accommodate rapid infiltration; and 4) receipt of a signed and dated final plan set. An extension to the 15.99 deadline was granted until August 28, 2017. No other new information has been received to date.

2017-024 Lil Explorers Daycare, Rogers. This is an existing 1.2 acre lot in the WJD II Addition across from the Kohl's Department Store on S. Diamond Lake Road, just west of Highway 101. The applicant is proposing a 11,610 SF two-story daycare with its associated parking and play area facilities. A regional stormwater pond was constructed to handle this water in 2001. Staff reviewed this project and found it in compliance with the regional stormwater management system installed in 2001 and 2003 and the Commission's Erosion and Sediment Control requirements. The site plans were approved by Staff pending receipt of an engineer's signed copy of the plan set.

2017-025 Grading by Ground Storage, Rogers. This is a 13 acre lot owned by the City of Rogers. The lot is undeveloped except for an above-ground water reservoir located near the SW corner of the property. The city is proposing to eventually construct a tennis center on this property. Because the site is short of soil, and a construction site nearby has excess soil, the city would like to temporarily stockpile soil and rough grade the areas identified as phase I (two field areas in the southeast area of the lot) on the site plan dated June 2, 2017. *Commission staff reviewed this site for compliance to Rule E. The E&SC plans meet the Commission's standards. Staff administratively approved Phase I grading plans. This item will be removed from the report.*

2017-027W Mill Pond Restoration, , Champlin. This application proposes to restore the aquatic and riparian habitat of the Upper and Lower Mill Ponds (DNR Public Waters Basin No. 061P) to improve water quality, enhance shoreland and aquatic habitat, develop a sustainable fishery, and provide public access to the lake. No Wetland Conservation Act jurisdictional impacts are occurring from this project. The drawdown of Mill Pond will begin in September 2017 and construction will begin in December 2017 with completion by October 2018. *The Commission reviewed and approved this project for compliance to its wetland, floodplain, E&SC and buffer criteria at their August meeting contingent upon 1) DNR issuance of a permit and compliance of said permit 2) Compliance Army Corps of Engineers regulations. 3) Staff approval of the final operation and maintenance plan on the forebay area at the upstream end of the Upper Mill Pond. 4) Staff approval of the contractor SWPPP design and 5) Final plans signed and dated by an engineer..*

2017-028W Fehn Meadows Wetland Bank, Corcoran. The owner of this 63-acre parcel would like to pursue a potential wetland banking project during development. This site is located south of CR 117, between Trail Haven and Cain Roads. An initial wetland bank scoping document was provided to the Commission as LGU for the City of Corcoran. This will be reviewed with BWSR to determine if the site is a good candidate for the BWSR Wetland Banking Program. If BWSR and the LGU believe it is, the next phase of the process will be a Concept Banking Plan Application. The final phase, would be the final Wetland Banking Plan. A TEP was held on-site on July 6, 2017. Findings were provided to the applicant and BWSR. *This item will remain on the report as a placeholder until an application is received.*

2017-029 Brayburn Trails, Dayton This is two parcels, totaling 154 acres, located south of 117th Ave N and 1/3rd of a mile east of East French Lake Road. The Excelsior Group is proposing to develop the parcels into 256 units of single family homes. The review is for conformance with the Commissions rules D, E, F, G, and I. The project proposes impacts to floodplain storage with mitigation and wetland impacts. At their August 9, 2017 meeting the Commission approved Staff's findings dated August 2, 2017 with five conditions.

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2017-030 Brindle Path, Medina. This is a 40-acre site proposed for 68 single family lots. It is located just north of the Polaris Headquarters. Staff provided preliminary comments to the City. *This item will remain on the report as a placeholder until an application is received.*

2017-031 Bass Lake Crossing, Corcoran. This is two parcels, 48.5 total acres, located north of the intersection of CR 10 and Larkin Road. M/I Homes is proposing to develop the two parcels into 97 single-family residential homes. As proposed, the project will require 0.3303-acre of jurisdictional wetland fill within 5 separate wetland locations. The review will be for compliance with the Commission rules D, G, and I. A notice for the wetland replacement plan was sent on August 1 requesting comments by August 31. *A TEP met on August 25 and determined the WCA replacement plans meet the intent of the Commission and MN WCA requirements and recommended approval. Site plans do not meet the Commission standards at this time. Staff has no recommendation at this time.*

2017-032 Rachel Development Wetland Delineation, Corcoran. This is two parcels with 40 total acres located west of the Lions Park on CR 10. Two wetlands were identified and delineated on this property. *Staff reviewed the delineation and finds it acceptable per WCA and Commission standards. It will be noticed as approved. This item will be removed from the report.*

2017-033 Jeff Schalo Wetland Exemption, Corcoran. Shalo is requesting to clean out an existing ditch to its original elevations (6'-1.0' cleanout) and install a non-perforated drain tile through some wetland areas. These items are eligible for a drainage maintenance exemption and a de minimis exemption (filling <1000 SF). *An exemption certificate was issued per Commission and WCA requirements. This item will be removed from the report.*

2017-034 Plymouth Memory Care, Plymouth. *This project is a new Senior Living Facility located on a 4.7 acre parcel located northwest of CR 101 and Medina Road. The project will replace one single family home located on the site. Stormwater, grading and erosion control plans were submitted for review. Staff has completed its review and will be recommending approval of the project at the September meeting.*

2017-035 Weston Woods, Medina. *This is an 80 acre townhome development located northeast of Chippewa Road and Mohawk Drive. Staff will provide preliminary comments to the City and this item will remain on the report as a placeholder until plans are received.*

2017-036 Enclave at Elm Creek, Plymouth. *This is a 73 acre parcel located on CSAH 101 and Prairie Creek Road, about ¾ miles north of TH 55. The property will be developed into 111 residential lots and a new school site. Stormwater, grading and erosion control plans were submitted for the residential portion of the property. Only stormwater management plans for the future school site were submitted for our review. No grading or erosion control plans were submitted for the school site. An update and recommendation may be available for the September meeting.*

2017-037 Corcoran L-80 Lift Station, Corcoran. *This is a Met Council project for sanitary sewer repairs and upgrades to a lift station in the City of Corcoran. Plans were not received in time to complete a review for the September meeting. Staff will review and provide a recommendation at the October meeting.*

2017-038 Bass Lake Estates, Corcoran. *This is a proposed residential development consisting of 55 lots on a 40-acre site. An incomplete application was received on September 5, 2017.*

FINAL RECORDINGS ARE DUE ON THE FOLLOWING PROJECTS:

During the month of August Staff requested updates from the cities on these projects.

2015-006 Veit Building and Parking Lot Addition, Rogers. *Approved on May 13, 2015, pending the SAFL-Baffle weir being covered by an easement and the appropriate operation and maintenance agreement being obtained and recorded with the property. In his August 31, 2017 email, Andrew Simmons responded that he has the O&M agreement in hand, just awaiting recordation.*

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2015-020 Strehler Estates, Corcoran. Approved on January 10, 2015 contingent upon a conservation easement being recorded on the property title.

2015-030 Kiddiegarten Child Care Center, Maple Grove. This project was approved by the Commission at their December 9, 2015 meeting. If the City of Maple Grove does not take over the operation and maintenance of the underground system and the sump catch basins, an O&M agreement for the underground trench/pond system must be approved by the Commission and the City and recorded with the title.

2016-014 Balsam Apartments, Dayton. Approved April 13, 2016, pending recordation of an Operation and Maintenance agreement with an O&M plan. With his September 5, 2017 email, Jason Quisberg provided a copy of the executed O&M agreement. This item will be removed from the report.

2016-018 Cambridge Park, Maple Grove. Approved on July 13, 2016, subject to recorded preservation easements and pond maintenance provided by the City or through an approved operation and maintenance agreement recorded on the property title. Preliminary easements and operation and maintenance agreements for the ponds and preservation areas were received and approved by Commission Staff. Final proof of recording of the documents is still needed.

2016-019 Just for Kix, Medina. Approved June 8, 2016. Awaiting recordation of corrected O & M plan agreement for the bio-filtration basins. *With his September 5, 2017 email, Dusty Finke provided a copy of the executed O&M agreement. This item will be removed from the report.*

2016-021 Diamond View Estates, Dayton. Approved June 8, 2016, contingent that, if the City of Dayton/homeowners are to maintain the ponds and the bio-filtration basin, an operation and maintenance plan agreement must be submitted for approval to the City and the Commission and recorded within 90 days of the final plat approval. *Per his August 31, 2017 email, Jason Quisberg has indicated that Phase 1, approximately one-half of the full plat, is underway. The City will ultimately, upon final acceptance, be responsible for the stormwater ponds and basins in this development. This item will be removed from the report.*

2016-022 AutoZone, Maple Grove. At their June 8, 2016 meeting, the Commission approved Staff's findings dated June 1, 2016, with the condition of recording an approved O & M Plan within 90 days of the final plat approval.

2016-026 Faithbrook Church, Dayton. Approved August 10, 2016, with the stipulation that an approved O&M plan be recorded with the property within 90 days following final plat approval. *Per his August 31, 2017 email, Jason Quisberg has indicated that construction is significantly complete, although some vegetation establishment remains. The City still has an escrow in place; this will be held until the maintenance agreement is finalized and recorded.*

2016-038 AutoMotorPlex, Medina. Approved on October 31, 2016, with conditions. The only remaining condition is the recording of the O&M plan. *With his September 5, 2017 email, Dusty Finke provided a copy of the executed O&M agreement. This item will be removed from the report.*

2016-039 Sands Parcel (The Fields at Meadow Ridge), Plymouth. At its October 12, 2016 meeting, the Commission approved this project conditioned that an O&M plan be recorded within 90 days following the final plat approval. *Per his September 1, 2017 email, Ben Scharenbroich stated that the City will accept responsibility for the O&M on this site. This item will be removed from the report.*

2016-052 The Woods at Rush Creek, Maple Grove. At their March 2017 meeting, the Commission approved Staff's findings and recommendations dated February 15, 2017. Outstanding items are the biofiltration pond, O & M plans, and recording.

2017-014 Laurel Creek, Rogers. At their June 14, 2017 meeting the Commission approved Staff findings dated June 13, 2017, in which they recommended approval of this project with four conditions. All contingency items have been provided with the exception of the O&M agreement which is being negotiated by the City as to whether the City or the HOA will be responsible for the operation and maintenance of the stormwater management facility. *In his August 31, 2017 email, Andrew Simmons responded that the O&M agreement is still being negotiated.*

2017-017 Mary Queen of Peace Catholic Church, Rogers. At their June 14, 2017 meeting the Commission granted Staff approval authority pending satisfactory compliance with Staff's findings dated June 16, 2017. All items from the findings have been completed with the exception of the operation and maintenance agreements for the stormwater facilities. *In his August 31, 2017 email, Andrew Simmons responded that he has the O&M agreement in hand, just awaiting recordation.*

2017-021 Hindu Society of MN, Maple Grove. At their June 14, 2017 meeting, the Commission approved this project per Staff's recommendations. All the recommendations have been met with the exception of the O&M plan agreements.

FISH LAKE INTERNAL LOAD PROJECT.

1. The contract agreement to award the bid to HAB Aquatic Solutions has been signed by Elm Creek Commission and Three Rivers Park District.
2. HAB Aquatic Solutions will be receiving a letter awarding the bid with the contract agreement this week. After they return the contract agreement with signature, they will receive a notice to proceed with the project.
3. HAB Aquatic Solutions has already prepared transects for the alum application on the lake.
4. Fish Lake Alum Treatment is still planned to begin on September 18.
5. It is estimated that the alum treatment will continue throughout the week and be completed on September 22. The treatment application will be weather dependent.
6. The public access will be closed the entire week for the alum treatment.
7. There are no restrictions with water contact recreational activities (boating, swimming, tubing, water skiing, and fishing).
8. It is recommended that boating activity near the treatment barge occur at a minimum.
9. Three Rivers Park District is doing a study in collaboration with the University of Wisconsin to determine the binding capacity of phosphorus due to the alum application. The objective of the project is to:
 - a. Determine the Al:P binding ratio of newly-formed $\text{Al}(\text{OH})_3$ that has been exposed to peak hypolimnetic P using sediment traps deployed shortly before Al application.
 - b. Examine the extent of hypolimnetic P removal as a result of the Al application, and
 - c. Monitor vertical variations in total Al, mobile P, and Al-bound P in the sediment column and rates of P release from sediment several months after treatment.
10. The results from this research study will provide beneficial information that may change the way we do alum treatments in the future for other lakes. In addition, the study will estimate the alum binding capacity of phosphorus attributed to the alum treatment, and will assist with determination of alum dosage required for the second alum treatment on Fish Lake scheduled in 2019.

RUSH CREEK HEADWATERS SUBWATERSHED ASSESSMENT

1. Wenck staff have completed the hydroconditioning of the Digital Elevation Model (DEM) for the Study Area and are in the midst of QA/QC. They expect to submit the DEM and subwatershed delineations to Jim and Jason the week of August 21.
2. They are assembling water quality data, including monitoring being completed this year.
3. They are assembling map books for the Study Area. At this time they are preparing the following figures:
 - a. Location, including lakes, streams, and ditches
 - b. Land Use
 - c. Land Cover
 - d. Soil

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- e. Feedlots and animal locations
 - f. Subwatersheds and direction of flow
 - g. Coarse-grained Revised Universal Soil Loss Equation (RUSLE) sedimentation “risk”
 - h. Potential tile-drained areas
4. Water quality data and map books will be distributed with TAC meeting materials the week of September 6.
5. At the September 13 TAC meeting they expect to present the following:
- a. Review water quality and map book data
 - b. Preliminary discussion of Problems and Issues
 - c. Discussion of tools and models strategies
 - d. Discussion regarding public participation and input process



Effectiveness of Late Summer Aluminum Sulfate Application to Fish Lake, MN

PROPOSAL OF RESEARCH

13 August, 2017

University of Wisconsin - Stout
Sustainability Sciences Institute
Center for Limnological Research and Rehabilitation
Menomonie, Wisconsin 54751
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1.0 BACKGROUND.

Application of Al salts has been an effective management strategy for controlling internal P loading in lakes (Cooke et al. 2005, Huser et al. 2016). However, P binding efficiency on the $\text{Al}(\text{OH})_3$ floc and overall longevity depends to a large extent on the rapidity of exposure to P after $\text{Al}(\text{OH})_3$ formation. de Vicente et al. (2008a) found that Al binding efficiency for P can decrease by up to 75% within a short period of time (< 30 d) if not exposed to P, due to polymerization into a more ordered crystalline structure. Since newly formed Al flocs are generally less dense than surficial sediment, they can typically settle on top rather than sink or mix into sediment after application, resulting in much slower exposure to P via upward diffusion (James 2017). Under this scenario, polymerization leads to greatly decreased Al floc binding efficiency for P and shortened longevity. Thus, application during the late summer peak in hypolimnetic P accumulation can promote immediate exposure of the settling Al floc to soluble P for rapid binding and maintenance of a much higher P adsorption capacity after deposition onto the sediment surface.

2.0 PURPOSE.

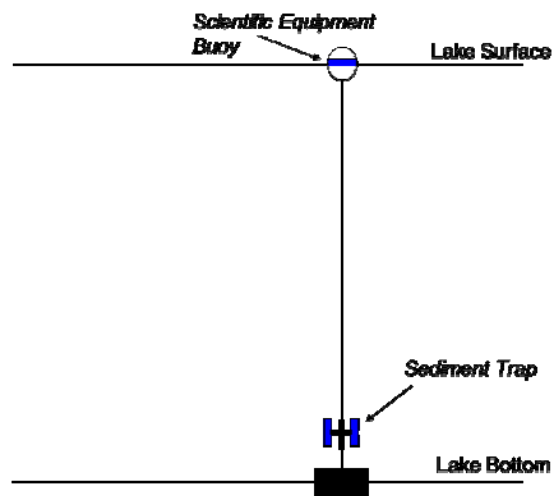
Historically, late summer Al application have typically been avoided due to concerns over unnecessarily filling binding sites with hypolimnetic P rather than sediment mobile P. There is little information on the effectiveness of this application strategy in controlling internal P loading. However, findings over the last decade have suggested rapid exposure to and binding of P is desirable to both reduce polymerization and maintain higher P binding efficiency after deposition. Late summer application of Al to Fish Lake during peak hypolimnetic P accumulation provides an opportunity to examine the extent of P binding onto the Al floc during and after a late summer alum treatment to Fish Lake. The objectives of these investigations are to specifically:

1. determine the Al:P binding ratio of newly-formed $\text{Al}(\text{OH})_3$ that has been exposed to peak hypolimnetic P using sediment traps deployed shortly before Al application
2. examine the extent of hypolimnetic P removal as a result of the Al application, and
3. monitor vertical variations total Al, mobile P, and Al-bound P in the sediment column and rates of P release from sediment several months after treatment.

3.0 SCOPE OF WORK.

Task 1. Al:P binding ratio in the newly-formed Al floc

Sediment traps will be deployed above the sediment surface in the deep south basin and central basin of Fish Lake shortly before the start of Al application. The traps will be secured to a plastic-coated steel cable, anchored with concrete block, and buoyed at the surface.



Traps will be collected ~ 1-2 weeks after application and Al floc deposition. The contents will be analyzed for dry mass, total Al, Al-bound P, and the Al:P binding ratio. Results from this task will be compared with changes in the hypolimnetic SRP vertical profile before and after the Al application (see Task 2) to estimate the mass of hypolimnetic P sequestered by the settling Al floc.

Task 2. Changes in the hypolimnetic soluble reactive P (i.e., SRP or ortho-P)

Vertical variations in in situ variables (temperature and dissolved oxygen) and hypolimnetic SRP will be collected at 1-m intervals the 2 sediment trap stations during trap deployment and retrieval. In situ measurements will be collected using a YSI 6600 data sonde calibrated against Winkler titrations. Samples for SRP will be collected using a peristaltic pump and tygon tubing. Water samples will be field-filtered under anoxic conditions using a 60-cc syringe and 0.45 μm syringe filter. Filtered samples will be stored on ice and analyzed using standard methods (APHA 2016) within 24 hours. Changes in the mass of SRP as a result of Al application will be calculated in conjunction with *Task 1* to estimate the Al:P binding ratio and Al-bound P sequestered as a result of treatment.

Task 3. Rates of diffusive P flux under anaerobic conditions

Intact replicate (duplicates) sediment cores will be collected from the two established stations in Fish Lake for the determination of rates of P release from sediment under controlled laboratory conditions. Sampling will occur during the summer 2018, nearly one year after the initial Al application, to quantify the initial Al treatment effectiveness in controlling anaerobic diffusive P flux. All cores will be carefully drained of overlying water in the laboratory and the upper 10 cm of sediment will be transferred intact to a smaller acrylic core liner (6.5-cm dia and 20-cm ht) using a core remover tool. Surface water collected from each lake will be filtered through a glass fiber filter (Gelman A-E), with 300 mL then siphoned onto the sediment contained in the small acrylic core liner without causing sediment resuspension. They will be placed in a darkened environmental chamber and incubated at a constant temperature to reflect summer conditions. The oxidation-reduction environment in the overlying water will be controlled by gently bubbling air (oxic) or nitrogen (anoxic) through an air stone placed just above the sediment surface in each system. Bubbling action will insure complete mixing of the water column but not disrupt the sediment. For each station, duplicate cores will be subjected to oxic conditions and additional duplicate cores will be subjected to anoxic conditions.

Water samples for soluble reactive P will be collected from the center of each system using an acid-washed syringe and filtered through a 0.45 μm membrane syringe filter. The water volume

removed from each system during sampling will be replaced by addition of filtered lake water preadjusted to the proper oxidation-reduction condition. These volumes are accurately measured for determination of dilution effects. Soluble reactive P is measured colorimetrically using the ascorbic acid method (APHA 2005). Rates of P release from the sediment ($\text{mg m}^{-2} \text{d}^{-1}$) are calculated as the linear change in mass in the overlying water divided by time (days) and the area (m^2) of the incubation core liner. Regression analysis is used to estimate rates over the linear portion of the data.

Task 4. Sediment chemistry

Additional sediment cores collected at the two stations in 2018 will be sectioned vertically over the upper 20-cm layer to evaluate variations in sediment physical-textural and chemical characteristics. These cores will be sectioned at 1-cm intervals over the first 6 cm and at 2-cm intervals below that sediment depth.

A known volume of sediment will be dried at 105°C for determination of moisture content, wet and dry bulk density, and burned at 550°C for determination of loss-on-ignition organic matter content (Avnimelech et al. 2001, Håkanson and Jansson 2002; Table 2). Phosphorus fractionation will be conducted according to Hietjes and Lijklema (1980), Psenner and Puckso (1988), and Nürnberg (1988) for the determination of ammonium-chloride-extractable P (loosely-bound P), bicarbonate-dithionite-extractable P (i.e., iron-bound P), and sodium hydroxide-extractable P (i.e., aluminum-bound P). A subsample of the sodium hydroxide extract will be digested with potassium persulfate to determine nonreactive sodium hydroxide-extractable P (Psenner and Puckso 1988). Labile organic P is calculated as the difference between reactive and nonreactive sodium hydroxide-extractable P. Additional sediment will be sent to Pace Analytical Services, Inc. (1800 Elm Street SE, Minneapolis, MN 55414) for analysis of total Al.

Sediment chemistry information will be used to estimate the Al:P binding ratio in the Al floc and the location of the Al floc in relation to the original sediment surface.

Task 5. Reporting

A summary report containing figures and tables that Task 1 and 2 will be provided in February, 2018. A comprehensive report that includes Task 3 and 4 will be provided at the end of the study in December, 2018.

Sediment Chemistry Price List							
Task	Year	Variable	Unit	Cost			
				Each	Quantity	Total	
1	2017	Sediment Traps	Field deployment	per hour	\$100	4	\$400
			Total Al	per sample	\$55	2	\$110
			Al-bound P	per sample	\$55	2	\$110
2	2017	Water Column	SRP	per sample	\$15.50	20	\$310
4	2018	Textural and Physical Characteristics	Moisture Content-Bulk Density	per sediment section	\$15	16	\$240
			Loss-on-ignition Organic Matter	per sediment section	\$15	16	\$240
4	2018	Sediment Total Metals	Total Al	per sediment section	\$55	16	\$880
4	2018	Sediment Phosphorus Extractions	Biologically-labile Phosphorus	per sediment section	\$135	16	\$2,160
3	2018	Sediment Flux or Internal Loading	Incubation for rates of soluble reactive P release	per 10 cm core	\$540	4	\$2,160
5	2017	Reporting		per hour	\$100	8	\$800
5	2018	Reporting		per hour	\$100	8	\$800
Total	2017						\$1,730
Total	2018						\$6,480

Technical Memo



Item 7b-1

To: Elm Creek WMC TAC/Commissioners

From: Diane Spector, Wenck Associates, Inc.
Jeff Strom, Wenck Associates, Inc.

Date: September 7, 2017

Subject: TAC Meeting #1
Rush Creek Headwaters Subwatershed Assessment

Work is proceeding on the Rush Creek headwaters Subwatershed Assessment. We have completed the hydroconditioning of the Digital Elevation Model (DEM) and are preparing to start applying the BMP analysis tools. Before proceeding to that next step, we will present at the September 13, 2017 TAC meeting the information and analysis we have put together so far. A more detailed version of the presentation was made to the Core Team of representatives from the cities of Rogers and Corcoran, Hennepin County, and Three Rivers Park District. The purpose of this presentation is to lay out the background and initial findings and to discuss those with you as well as to receive your input. We will also begin a discussion of how to proceed with landowner and general public participation and input.

Background

- TMDL approved June 2017, WRAPS approved December 2016
- Rush Creek Impairments:
 - Low DO: 75-93% reduction in TP
 - *E. coli*: 40-90% reduction
 - Fish/Invert IBI
- Lake Impairments
 - Henry Lake: 82% reduction in TP, ~570 lbs from watershed
 - Jubert Lake (not assessed but likely impaired, nutrients)
- Stressor ID – most probable causes
 - Altered hydrology
 - Excess sediment
 - Excess phosphorus (inverts)
 - Low DO (fish)

Figures 1 and 2 show the Elm Creek watershed and the Study Area respectively. Figure 2 shows the location of 2017 stream monitoring locations, which are denoted from upstream to downstream, RC7.2, RC4.2, RC2.1, and RC0.0. There is also a monitoring site on a tributary, designated TRIB0.6.

The following water quality figures show Rush Creek longitudinal water quality data, upstream (left) to downstream (right). Data for Henry Lake and Jubert Lake follow.

Observations

- Both TP and TSS increase between RC7.2 and RC4.3. *E. coli* starts high and stays high.
- Nitrogen does not seem to be an issue.
- There is a large wetland just upstream of RC2.1 that appears to act as a sink for TSS and particulate phosphorus.
- Orthophosphorus concentrations increase downstream of the wetland, and DO concentration falls. It appears that OP is being released from the wetland and DO is being consumed in the wetland or just downstream.
- The Henry Lake TMDL did not have the benefit of measured sediment release rates to confirm the modeled TMDL load split between watershed and internal loads. While not a part of this study, we would recommend that the Commission complete this in the future.
- Some information is available on stream condition, but some in-field work may need to be completed to further estimate the contribution of sediment and nutrients from in-channel sources.

Next Steps

The project budget calls for four TAC/Commission meetings, two small group meetings with landowners and other interested parties, and one public meeting. The Core Team discussed ways to obtain public input and buy-in, including identifying key land owners in the Study Area to participate and who may be willing to host demonstration projects. Other landowners or influential people who enjoy broader respect and who may not necessarily own property in the Study Area may be helpful to have participate as well. At the September 13, 2017 meeting we can talk in more detail about the TAC/Commission's approach to this topic.

Following TAC/Commission review of this background material, we will proceed to applying the modeling tools to the data to start to identify potential BMPs.

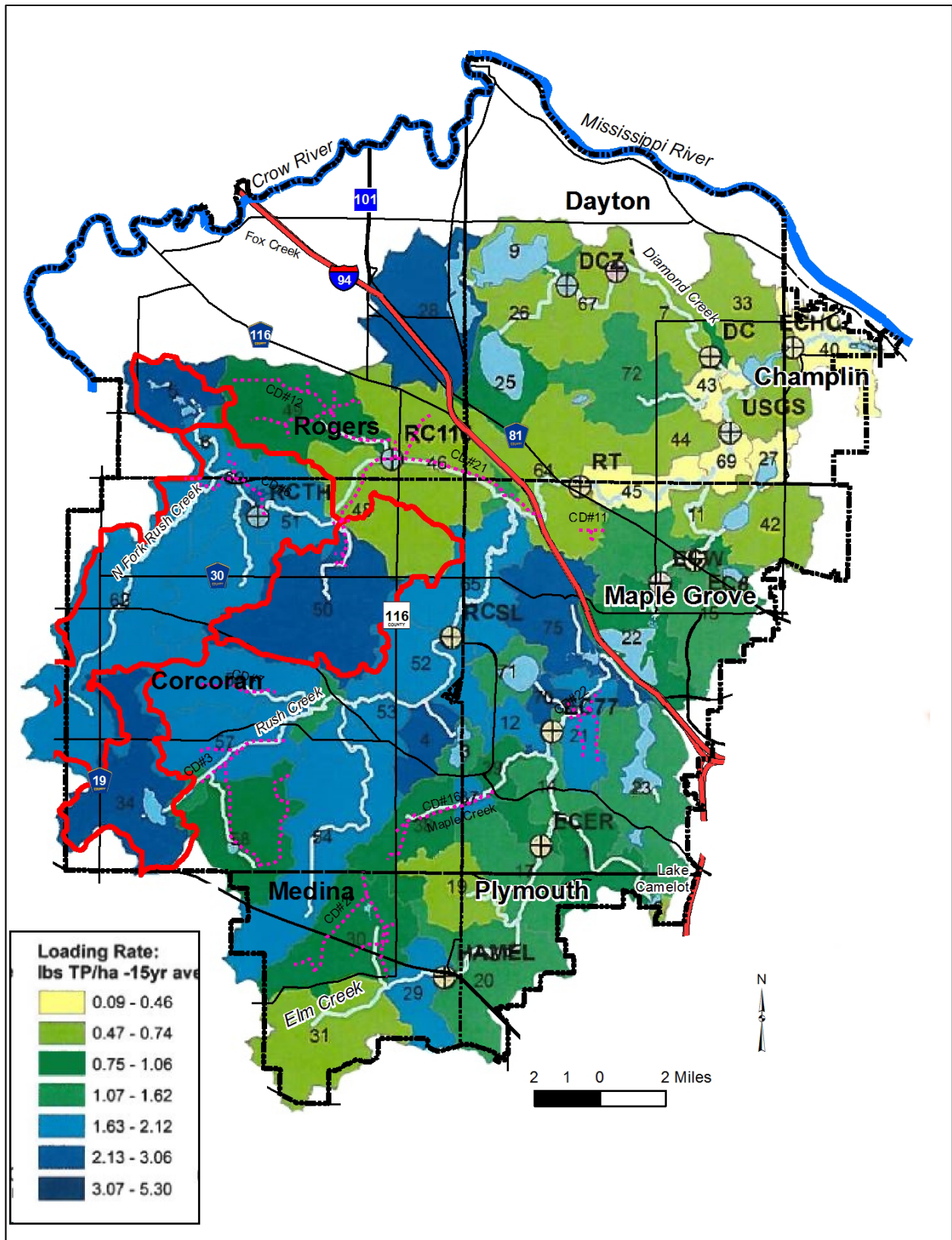


Figure 1. Elm Creek TMDL modeled TP loading rates. Subwatersheds being assessed are shown outlined in red. Darker blue subwatersheds have the potential to contribute high loads of sediment and nutrients than the lighter greens and yellow. The area in white drains directly to the Crow River or Mississippi River and was not modeled.

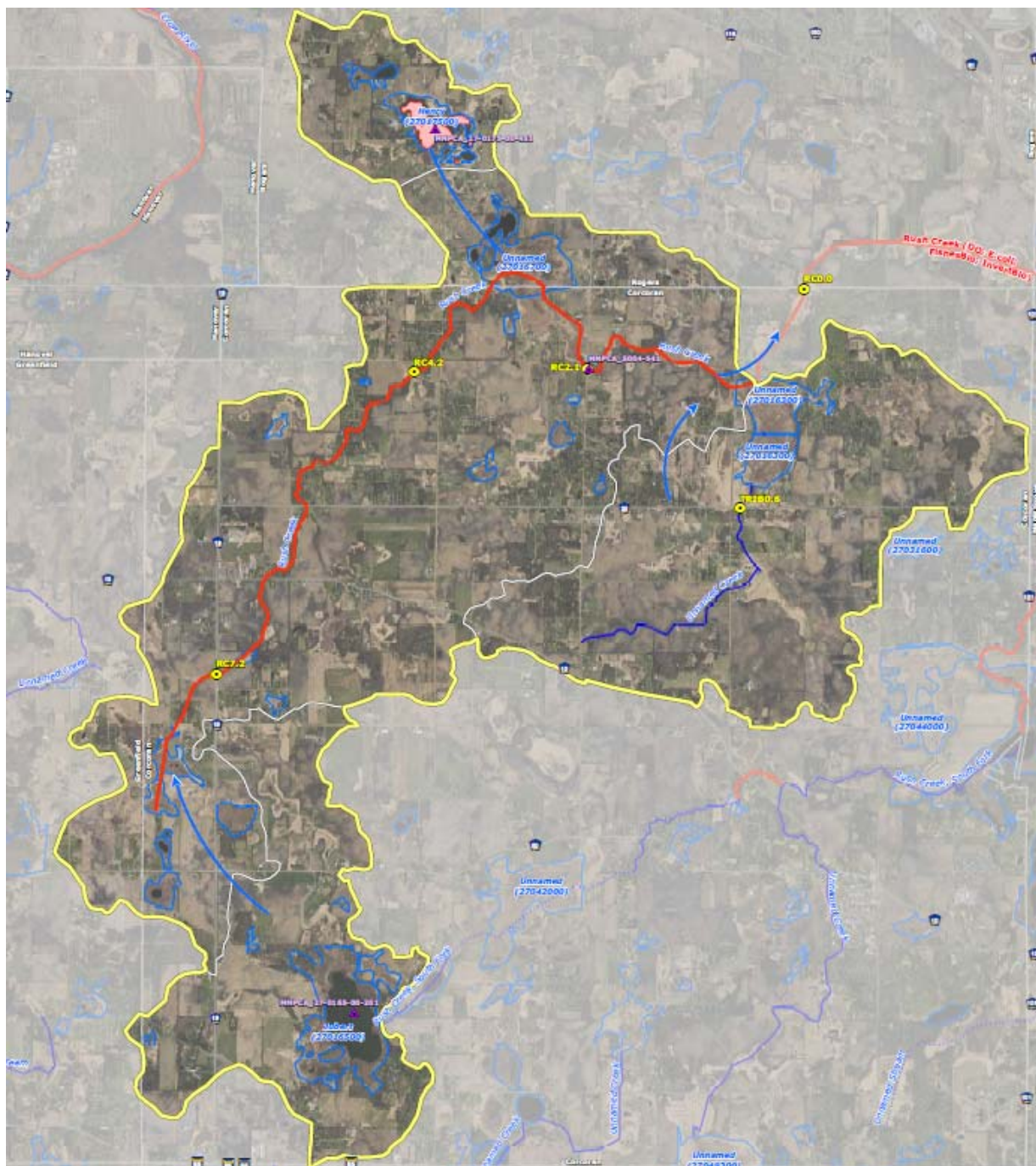
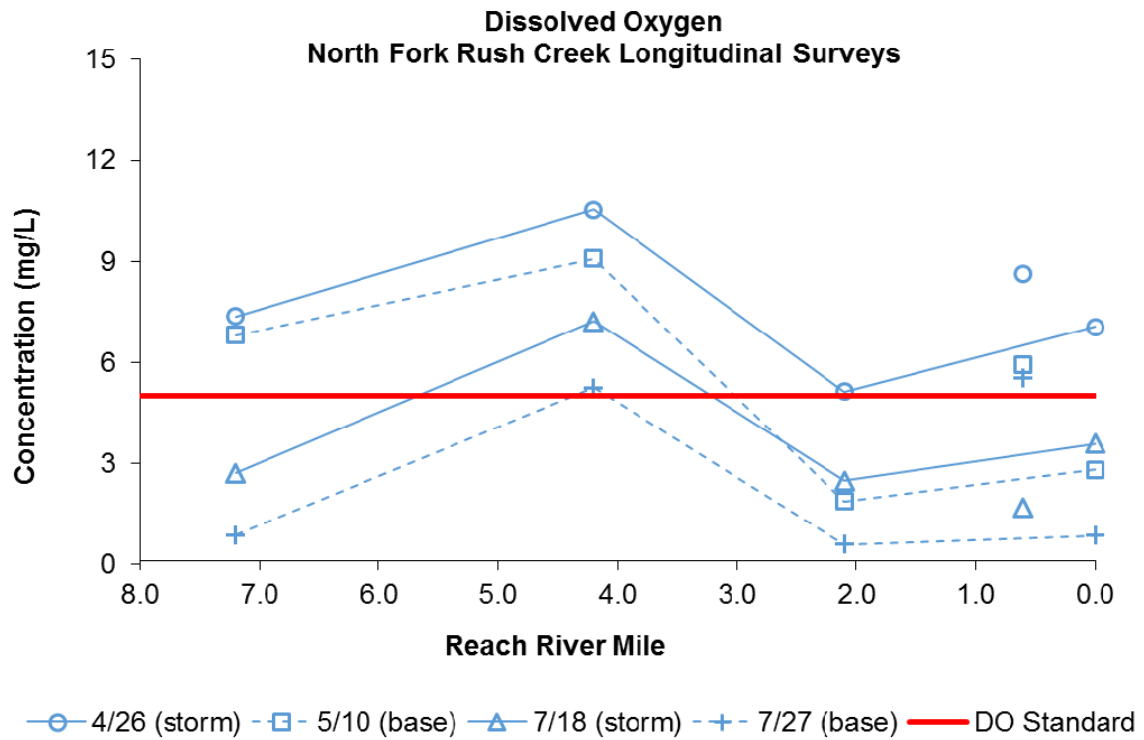
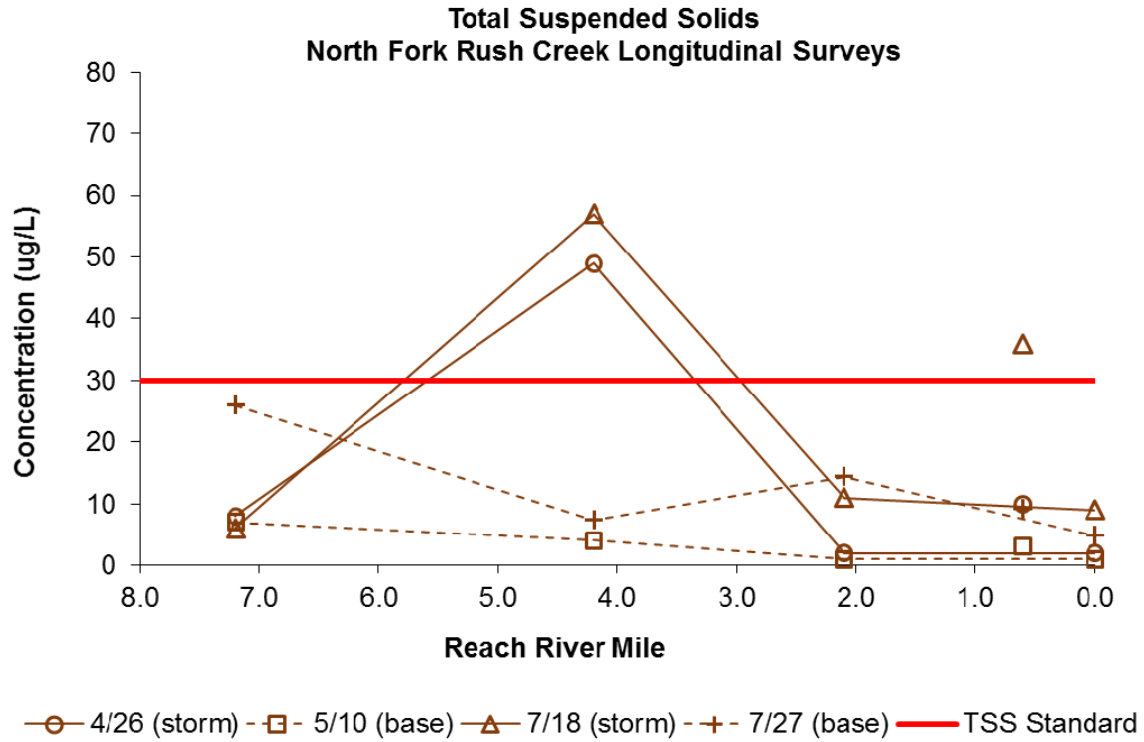
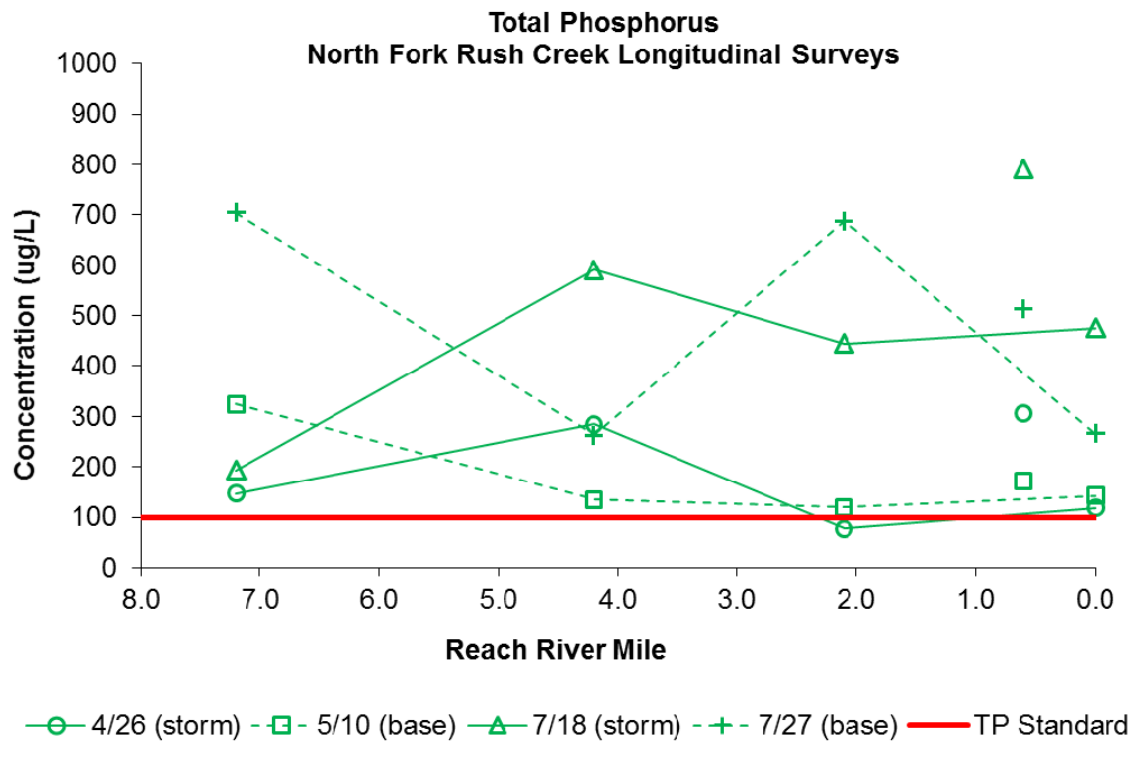
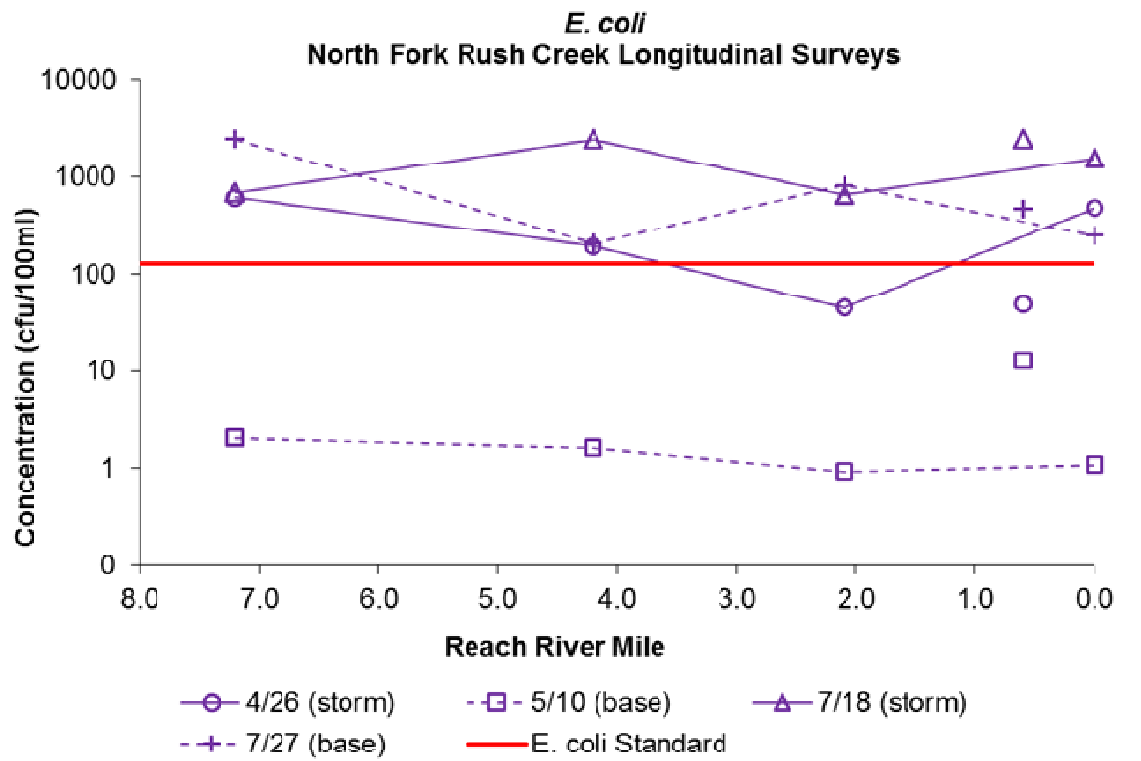
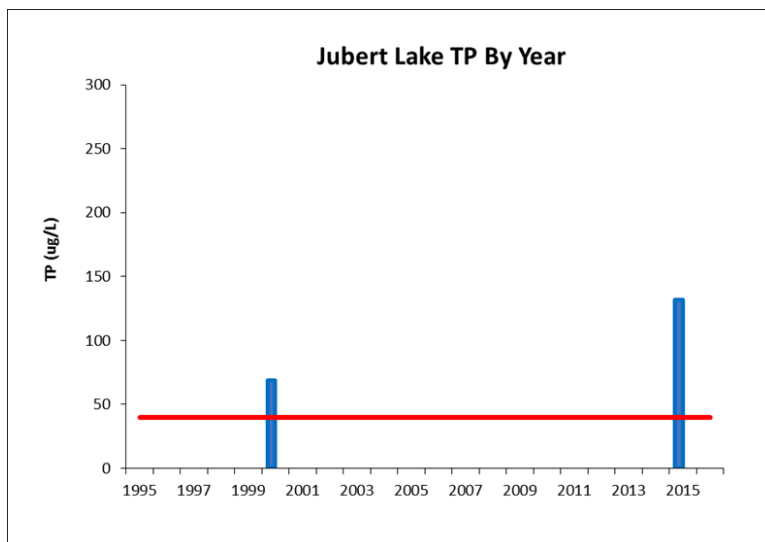
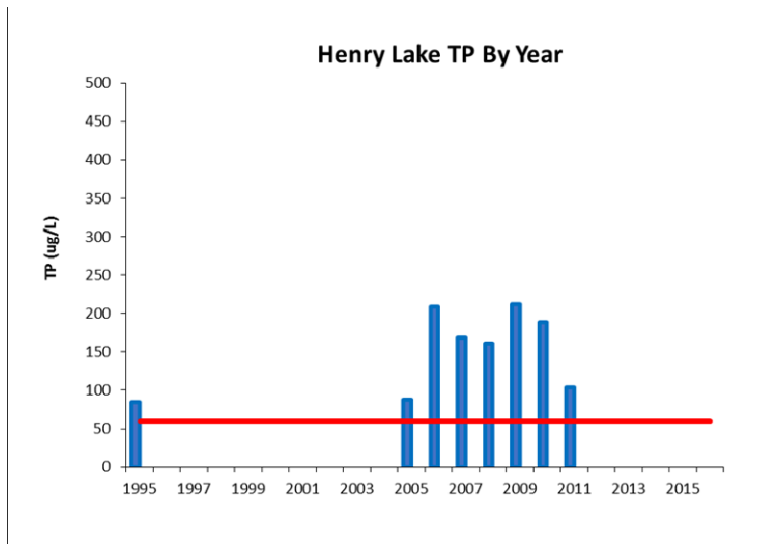
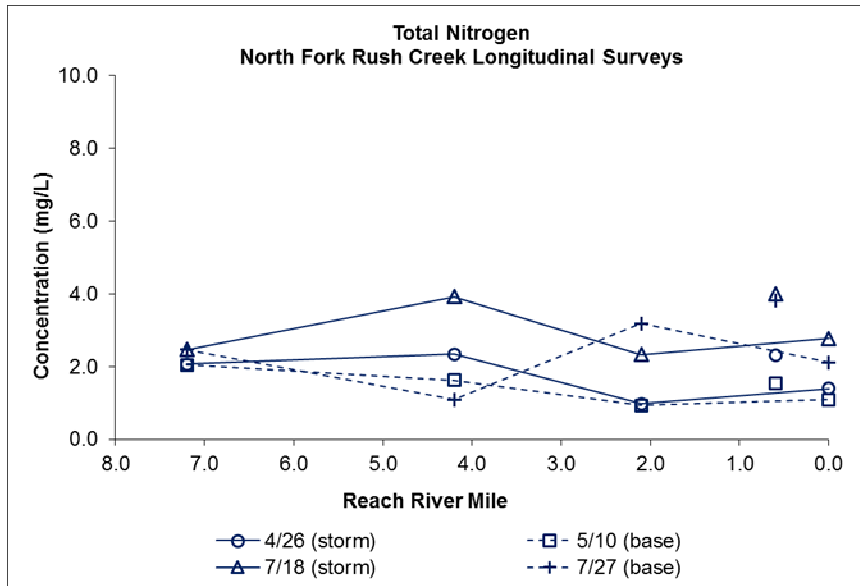


Figure 2. The Study Area. Yellow dots with labels are 2017 monitoring locations.







Technical Memo



Item 7b-2

To: Elm Creek WMO Commissioners
From: Diane Spector, Wenck Associates, Inc.
Date: September 7, 2017
Subject: Rush Creek Headwaters SWA Status Report

This report details Rush Creek Headwaters Subwatershed Assessment project progress through August 2017.

Budget status:

Budget*	\$56,700.00
Through 7/31/17	\$914.70
8/1/17 – 8/31/17	\$3,667.40
Balance	\$52,117.90

*For Wenck Associates services only, excluding JASS or Hennepin County services

Activities August 2017:

- Compilation of GIS inventory
- Hydroconditioning the Digital Elevation Model (DEM)

Expected September 2017 Activities:

- Attend one Core Team meeting
- Facilitate one TAC meeting
- Compile and review water quality and stream assessment data
- Compile map books for Study Area and each subunit
- Complete RUSLE and Probable Tile Drained Areas geo-analysis
- Begin analysis with ACPF and PTMApp tools
- Prepare website content

Minnesota Wetland Conservation Act

Technical Evaluation Panel Findings Report

Date(s) of Site Visit/Meeting: July 6, 2017 LGU: Elm Creek Watershed Management Commission
 County: Hennepin LGU Contact: James Kujawa
 Project Name: Cartway Trail Phone #: 612-348-7338
 Location of Project: 1912021330002 Email: james.kujawa@hennepin.us
 (attach map if possible) Address:

TEP ATTENDEES:

LGU: James Kujawa

SWCD: did not attend

BWSR: Ben Mayer

DNR: did not attend

OTHER ATTENDEES:

Jason Swenson, Elm Creek WMC

Dustin Simonson, WSB-Agent City of Champlin

OTHER ATTENDEES:**PROJECT DESCRIPTION AND PURPOSE OF MEETING:**

LGU called the TEP to discuss the sequencing analysis and discussion provided by the applicant in their June 8, 2017 memo. The meeting was held on-site to review the preferred and alternative layouts and their affects to the wetland/trees/trail alignments and natural resource areas and other considerations as discussed in the memo.

TYPE OF MEETING: Check all applicable☐ Office☒ On-Site☐ Phone Conference☐ E-Mail☐ Other: _____**TEP FINDINGS AND RECOMMENDATIONS ¹:**

One preferred and three alternative layouts were presented in a memo from the applicant on June 8, 2017 (attached). The TEP inspected the site on July 6, 2017. The wetland impacts, per the memo, are as follows; 1) Applicant Preferred Alternative, -2,172 sq. ft. 2) Alternative 1, -1,000 sq. ft. 3) Alternative 2, -100 sq. ft. and 4) Alternative 3, -No impacts.

Discussion; Alternative 3 was dismissed by the TEP due to the easement acquisition/logistics/impacts to existing ROW and private property issues.

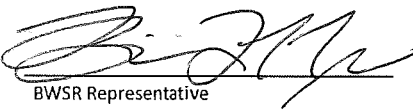
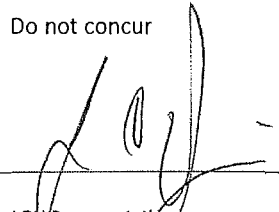
Alternative 2 was considered an acceptable alternative to the TEP. They felt the minimum wetland impacts (100 sq. ft.) were good for the natural resource, but the TEP also recognized the connection to the existing trail was at a 90 degree angle, affecting the bike and pedestrian safety aspect for such an approach to the intersection. the number of trees affected by this layout was questioned by the TEP.

Alternative 1 was the preferred alternative by the TEP. They felt it was a good compromise between the larger impacts (2,172 sq. ft.) of the applicants preferred alternative and the expected impacts for this alternative (1,000 sq. ft.) The TEP felt the impacts should be reduced further by the applicant constructing a retaining wall and fence along the wetland edge. The number of 8"+ trees impacted by this alignment seemed to be overestimated significantly. The TEP felt the trail alignment could be adjusted somewhat to avoid most, if not all the trees >8" in diameter without affecting the wetland filling necessary for a safe trail. The TEP also felt this alternative provided the intersection approach the applicant desired without compromising the safety and sight lines for pedestrians and bicyclists. They also felt this alignment was a good compromise for preserving some of the natural buffer vegetation between the existing homes and the new trail alignment.

¹ TEP Findings should be a meaningful concise summary detailing the project conditions, technical data, and what rules apply. The TEP recommendation should be clear, based on rule and best professional judgement.

Recommendations to the LGU. Per MN WCA Rule 8420.0520 subp 3 C and subp 4, A thru F and ECWMC Stormwater Management Plan, adopted October 2015, Appendix C Rule G; unless the applicant can provide additional detailed descriptions and information that the TEP should consider for their preferred alternative, the TEP recommends the LGU requires the applicant pursue alternative 1 as shown in their memo dated June 8, 2017 (attached) with the addition of designing retaining walls and safety fence for additional wetland minimization on the north side of the impacted area. The TEP also recommends the applicant pursue, to the greatest extent practicable, replacement wetland banking credits within the Elm Creek Watershed and Hennepin County, to achieve no-loss in the quantity, quality and biological diversity of wetlands in the watershed.

SIGNATURES

_____ SWCD Representative	_____ Date	 BWSR Representative	<u>7/14/2017</u> Date
Do not concur <input type="checkbox"/>		Do not concur <input type="checkbox"/>	
 _____ LGU Representative	<u>7/10/17</u> Date	_____ DNR Representative	_____ Date
Do not concur <input type="checkbox"/>		Do not concur <input type="checkbox"/>	

¹ TEP Findings should be a meaningful concise summary detailing the project conditions, technical data, and what rules apply. The TEP recommendation should be clear, based on rule and best professional judgement.



Memorandum

To: James Kujawa, Elm Creek Watershed Management Commission

CC: Charlie Lehn, City of Champlin

From: Dustin Simonson, WSB & Associates, Inc.

Date: June 8, 2017

Re: Cartway Trail
City of Champlin
WSB Project No. 01934-230

The following information has been gathered to address the comments received May 17, 2017 from the Elm Creek Watershed Management Commission (ECWMC) about the Cartway Trail project within the City of Champlin.

- 1) Can you provide at least two alternative alignments of the trail that show why or why not they meet the bike design standards or the trees and wetland areas they will impact. Preferred vs alternatives.
 - a. A specific tree survey isn't necessary, but the diameter and type that would be impacted by the alternatives would be helpful.

The Cartway Road Trail Improvements extends an existing trail west, along Elm Creek to Cartway Road and then north adjacent to Cartway Road to an existing parking area/trail head. The City of Champlin purchased the land in which the trail is being extended to complete another segment of a greenway trail corridor along the south side of Elm Creek. The existing trail alignment extends from the local residential street of Elm Creek Road between residential property to Elm Creek and then easterly along the south side of Elm Creek to East Hayden Lake Road near the Gettysburg intersection. The City currently owns the land east of this terminus and will ultimately extend the trail along the south side of Elm Creek to T.H. 169. That trail alignment will then complete a greenway corridor from Cartway Road east to T.H. 169. The proposed trail width of 10-feet is the minimum width recommended by trail design standards for multi-purpose trails with two-way bicycle traffic. The width is also needed due to the shorter sight lines and distances that are a result of its curvilinear alignment and greenway appeal.

The City of Champlin is also working with a property owner west of Cartway Road, to extend the trail west along the north side of Elm Creek to an existing trail system located in Josephine Nunn Park. Upon completion of these three segments, the proposed, the easterly segment, and the westerly segment, the trail will extend from the Elm Creek Park Reserve owned by Three Rivers Park District, east to the City Park System located northeast of T.H. 169 and East Hayden Lake Road. The greenway trail will have several accesses that extend out to the adjacent neighborhoods.

Preferred alternative: The proposed trail alignment goes south along Cartway Road and then turns east to connect with the existing trail within the area. The proposed trail alignment was selected as it maintains a greenway feel to the trail, meets trail design standards for a continuous trail, and has balanced impact on the environment and on the adjacent neighborhood. The alignment has a proposed wetland impact of 2,172 square feet and has the least impact to trees (10 trees, 8 inches dbh or less, ash and boxelder) and grading disturbance.

Three alternative trail alignments were explored in addition to the proposed trail (see attached Cartway Road Trail Project figure).

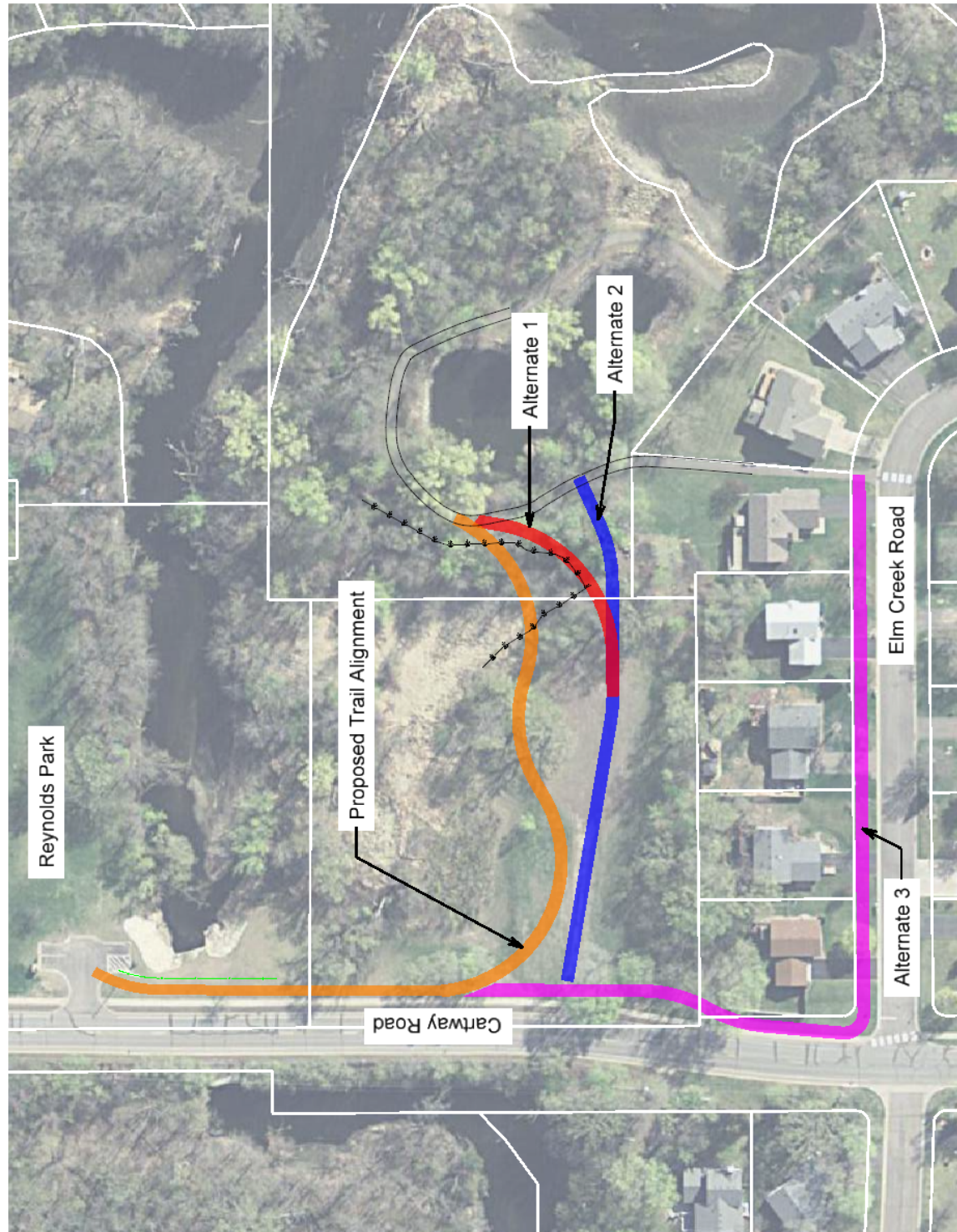
Alternative 1: This alternative has the trail alignment shifted further south than the preferred trail alignment. This alignment would still have wetland impact due to grading on the north side of the trail to provide the necessary clear zones for the trail. The slopes adjacent to the wetland area are steeper and slightly higher along this alignment, which would result in longer slopes extended on the north side of the alignment into the wetland area. This would cause more tree removal than the preferred alternative (24 ash trees ranging from 8 – 14 inches in Diameter) and slope grading along with approximately 1000 square feet of wetland impacts. The amount of tree impact and grading along with the wetland impacts has made this alignment undesirable.

Alternative 2: This alternative follows alternative 1 alignment and then stays further south to meet up with the existing trail. This trail alignment does not create the continuous route as desired by the City, as this alignment ties into the existing trail at a 90-degree angle. This is not conducive to bikers using the path and creates a safety concern for the city as it limits sight lines of the approaching trail. This alignment would have greater tree impacts than the preferred alternative (14 trees 8-12 inches dbh, ash, box elder, and elm) and along with approximately 100 square feet wetland impacts due to the necessary slopes that are required for the trail and clear zones. Because the lack of continuity and poor sight lines create safety risks for bikers, the tree removal is greater, and wetland impacts are not avoidable, this trail alignment was deemed undesirable.

Alternative 3: A third alternative was explored to extend the trail along the north side of the local residential street of Elm Creek Road. Constructing the 10-foot trail within a 14-foot space that crosses five driveways is very undesirable. Due to mailboxes and street signs, trail easements would be required from the adjacent properties. The north- south trail extension adjacent to Cartway Road would also require trail easements, tree clearing and impacts on private property. A significant deterrent for this alignment is the trail would no longer be adjacent to Elm Creek and it would lose its greenway appeal.

Based on the above analysis it was determined that the proposed trail creates the desired greenway appeal the City desires for the trail.

If you have any additional questions regarding this submittal, please contact me at dsimonson@wsbeng.com or 763-270-3475.



<div> <div>WSB Project 01934-230 City Project No. 21703</div> <div>Cartway Road Trail Project For the City of Champlin</div> <div> <div> <div>WSB</div> <div>WISCONSIN STATE BUREAU OF LAND MANAGEMENT</div> </div> <div> <div>617 Tremont Blvd St Paul, MN 55105 612.224.1100 www.wisconsin.gov</div> <div> <div>WSB</div> <div>WISCONSIN STATE BUREAU OF LAND MANAGEMENT</div> </div> </div> </div> </div>	<div> <div> <div>DATE</div> <div>BY</div> <div>CHK</div> </div> <div> <div>04/11/2018</div> <div>6/1/17</div> <div>6/1/17</div> </div> </div>	<div> <div> <div>DATE</div> <div>BY</div> <div>CHK</div> </div> <div> <div>04/11/2018</div> <div>6/1/17</div> <div>6/1/17</div> </div> </div>	<div> <div> <div>DATE</div> <div>BY</div> <div>CHK</div> </div> <div> <div>04/11/2018</div> <div>6/1/17</div> <div>6/1/17</div> </div> </div>	<div> <div> <div>DATE</div> <div>BY</div> <div>CHK</div> </div> <div> <div>04/11/2018</div> <div>6/1/17</div> <div>6/1/17</div> </div> </div>
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Item 5a_v

Cartway Road Trail Project For the City of Champlin

- ## GOVERNING SPECIFICATIONS

THE 2016 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION", SPECIAL PROVISIONS, AND ANY AMENDMENTS THERETO AND THE "STANDARD UTILITY SPECIFICATION" FOR WATERMAIN SERVICE LINE INSTALLATION AND STORM SEWER INSTALLATION REFERRED "CEAM" DATED 2013, OR AS MODIFIED IN THE PROJECT MANUAL.

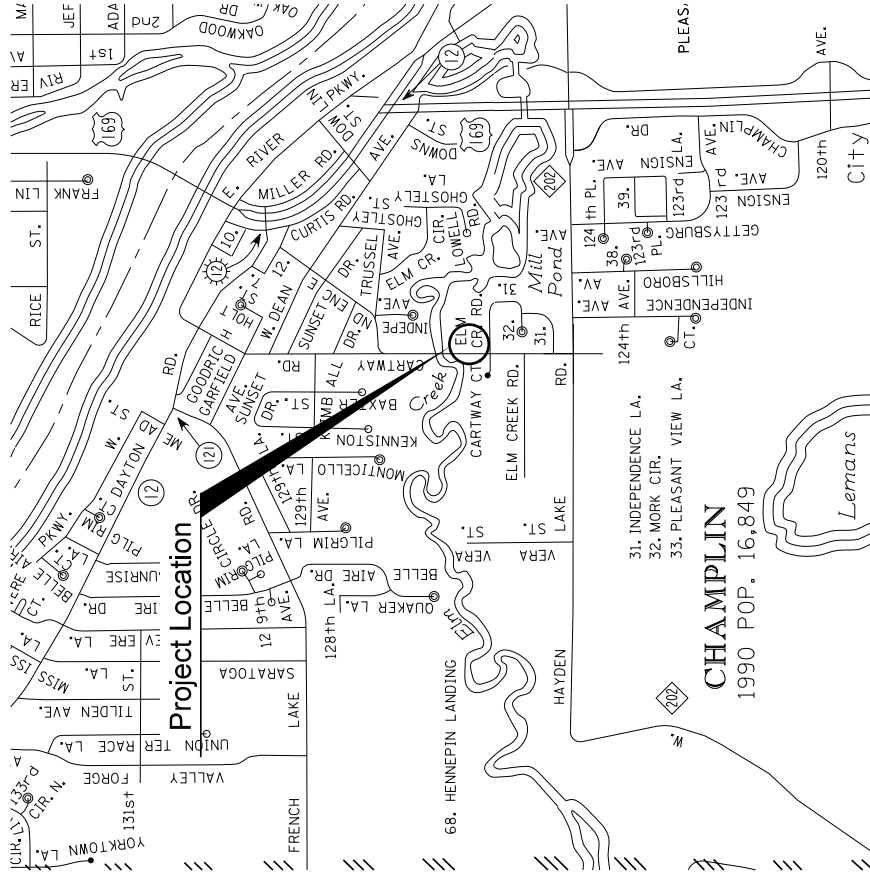
ALL TRAFFIC CONTROL DEVICES AND SIGNING SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES DATED FEBRUARY 2015, INCLUDING THE FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS, DATED JANUARY 2014.

SHEET NO. DESCRIPTION

- | | |
|-----|------------------|
| 1 | Title Sheet |
| 2 | Typical Sections |
| 3 | Trail Plan |
| 4-7 | Cross Sections |

THIS PLAN CONTAINS 7 SHEETS.

ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS AND ORDINANCES WILL BE COMPLIED WITH IN THE CONSTRUCTION OF THIS PROJECT.




EXCAVATION NOTICE SYSTEM

A CALL TO GOPHER STATE ONE (454-0002) IS REQUIRED A MINIMUM OF 48 HOURS PRIOR TO PERFORMING ANY EXCAVATION.

THE SURFACE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UTILITIES HAS BEEN DESIGNATED UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL IS DETERMINED ACCORDING TO THE GUIDELINES OF CLAUSE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEFINITION OF EXISTING SUBSURFACE DATA". THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING THE TYPE AND LOCATION OF UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR COMPLETE. THE CONTRACTOR SHALL INCLUDE THE NECESSARY FIELD SURVEY AND INVESTIGATION TO DETERMINE THE TYPE AND LOCATION OF UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERE TO.

STATE LAW REQUIRES ANYONE DIGGING, GRADING OR EXCAVATING TO OBTAIN A FIELD LOCATE OF ALL UTILITIES.



NO.	DATE	BY	REVISIONS	DESCRIPTION
				DESIGN BY: BLP
				PLAN BY: BLP
				CHECKED BY:
				TCH
				APPROVED BY:
				
				C. C. JOHNSON, JR.
				DATE: XX/XX/XX
				SCALE: 1/4" = 1'-0"
				1987

477 Temperance Street
St. Paul, MN 55101
Tel: (651)286-8450 • Fax: (651)286-8488
wsbeng.com



engineering and environmental construction

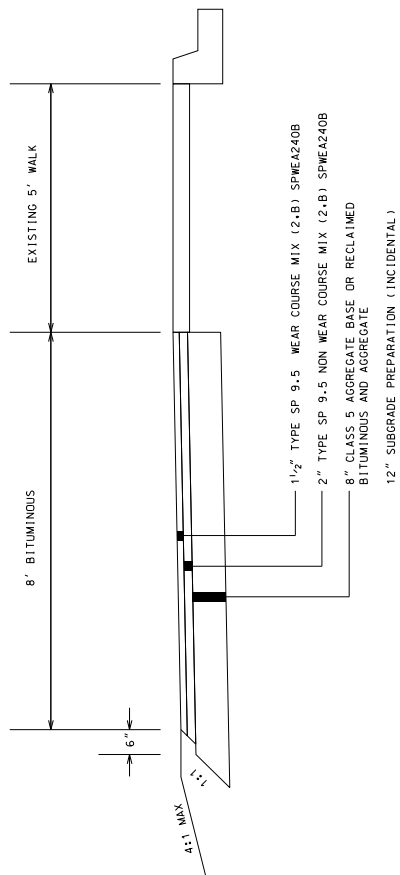
Cartway Road Trail Project
For the City of Champlin

WSB Project 01934-230
City Project No. xxxxx

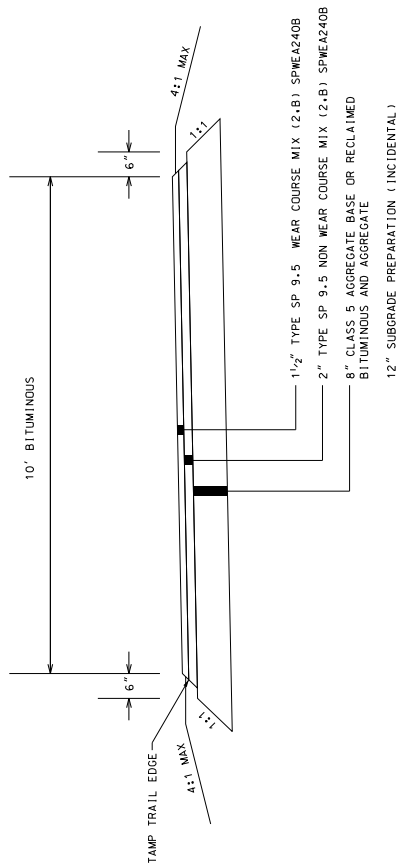
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SHEET
1 OF 7

Item 5a_v

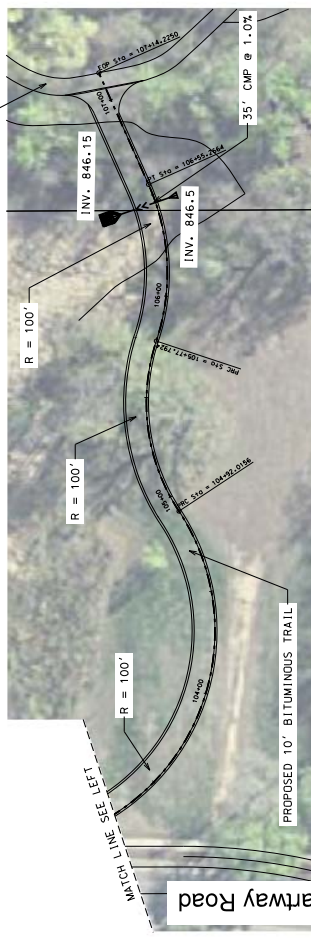
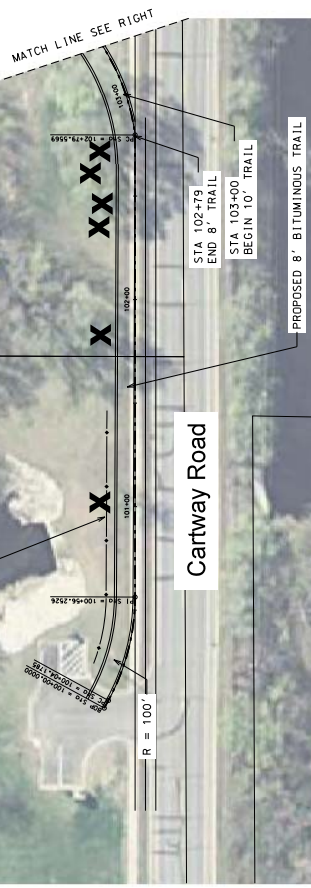


Cartway Trail
STA. 100+00 to STA. 103+00

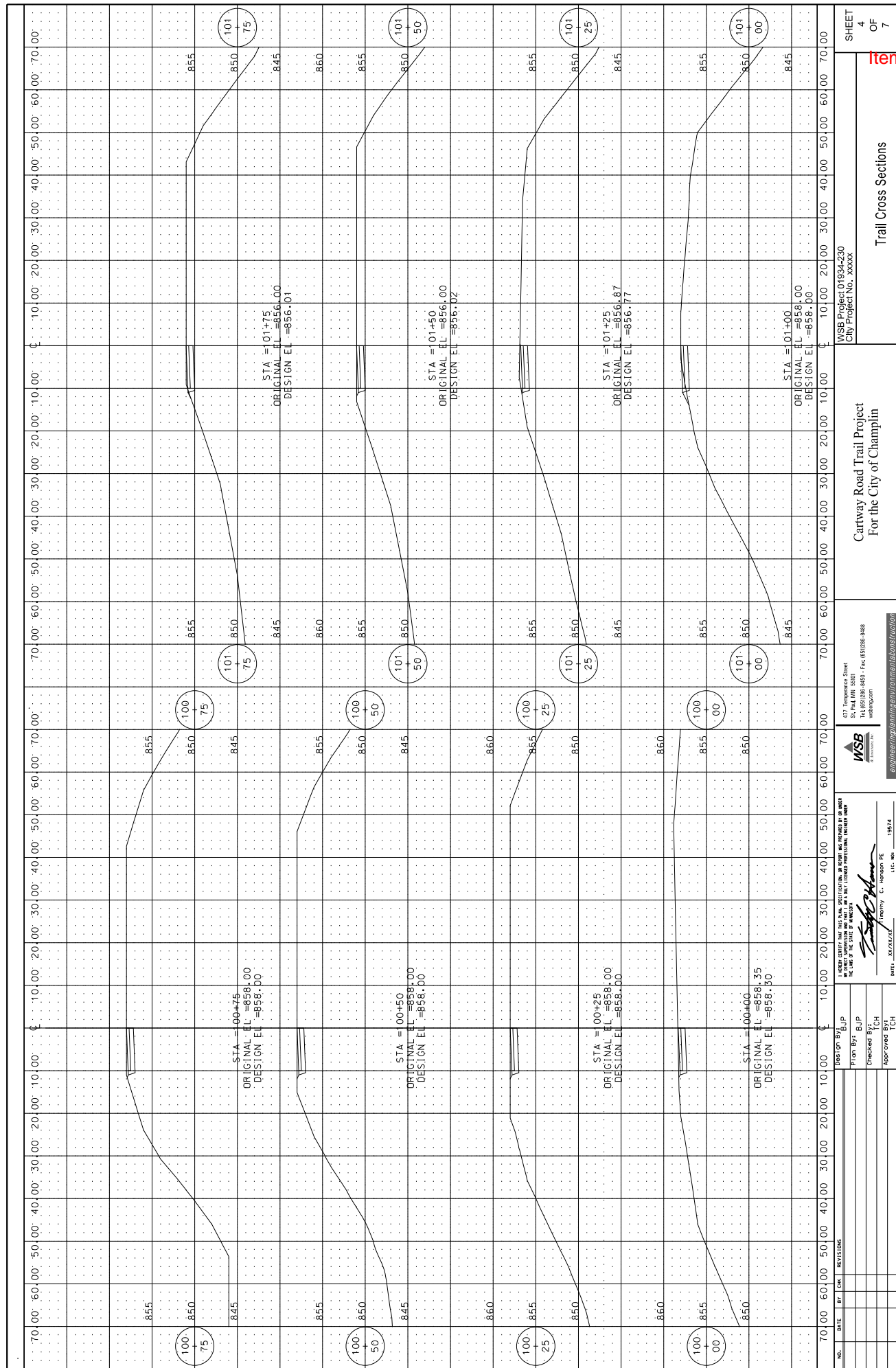


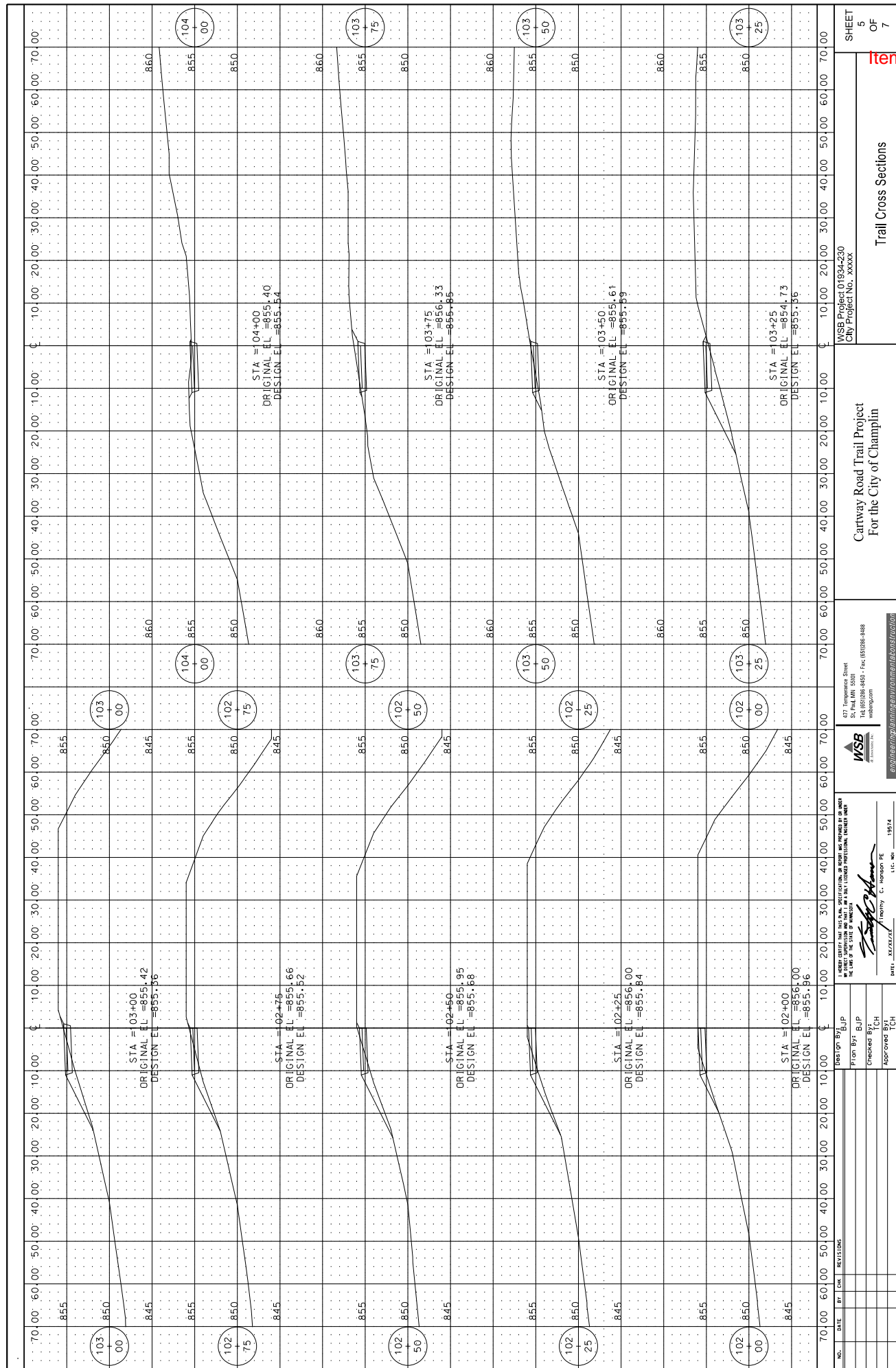
Cartway Trail
STA. 103+00 to 107+00

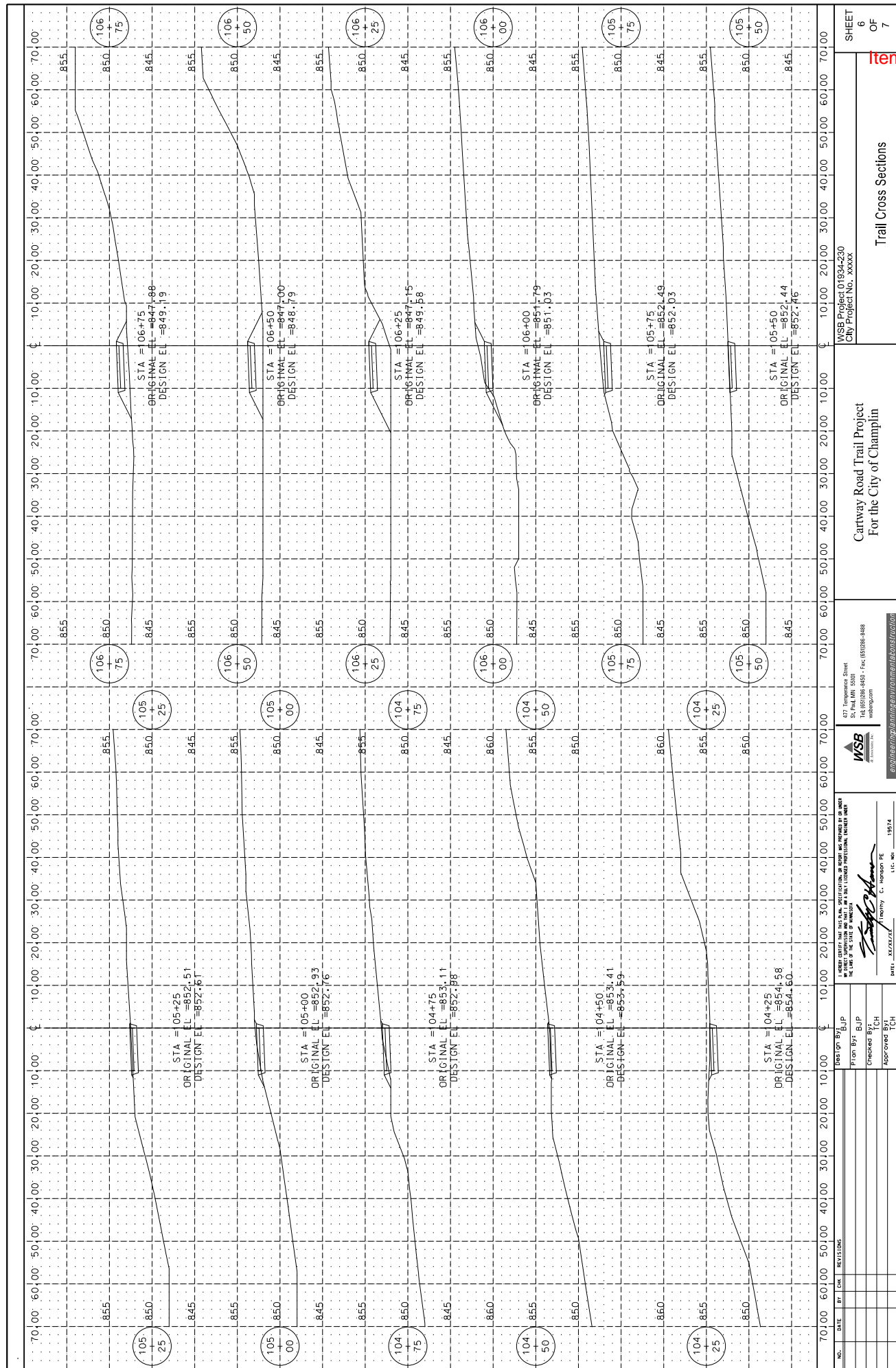
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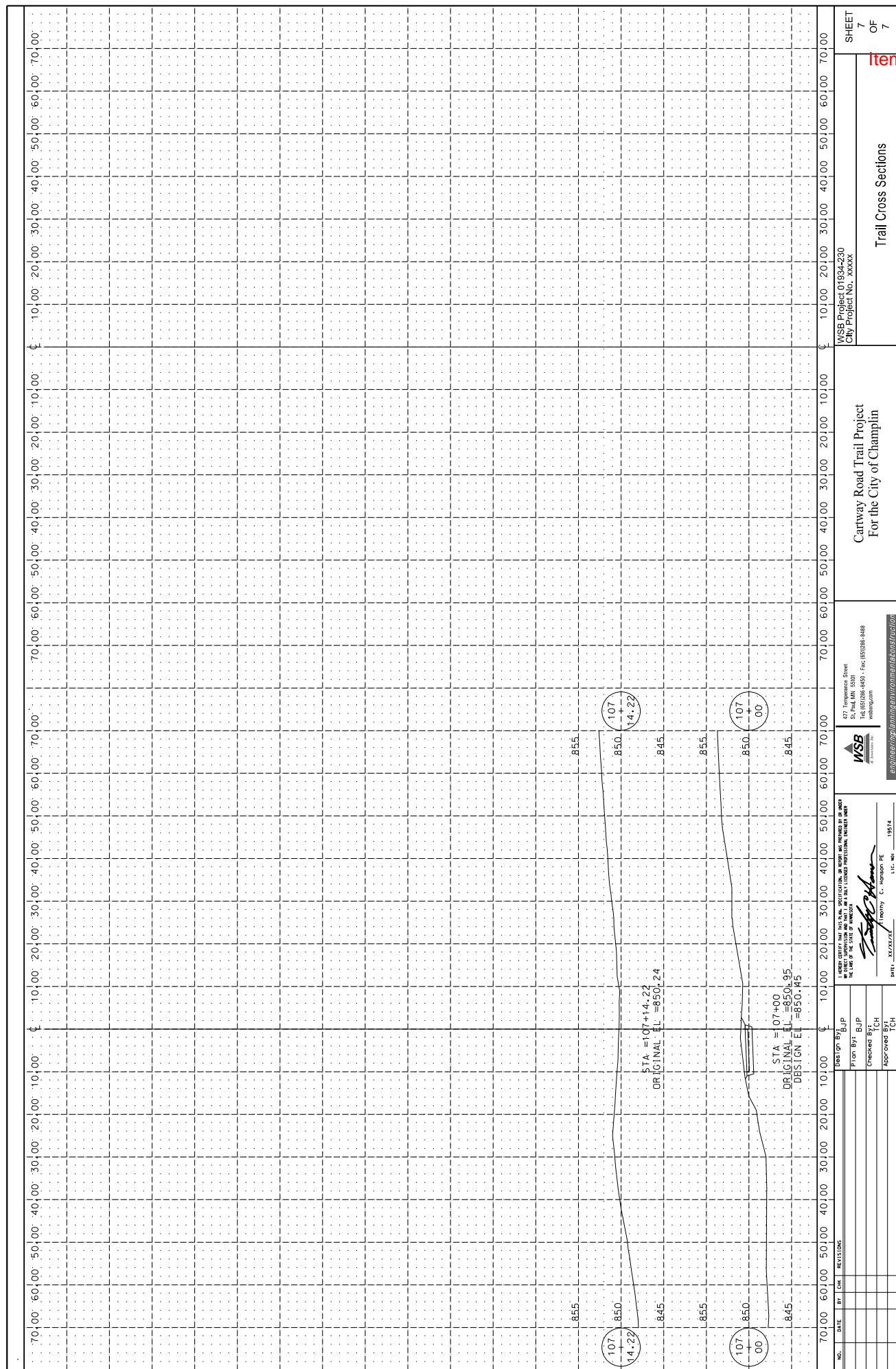
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Item 5a_v









elm creek

Watershed Management Commission

Item 5a_z

ADMINISTRATIVE OFFICE
3235 Fernbrook Lane
Plymouth, MN 55447
PH: 763.553.1144
E-mail: judie@jass.biz

TECHNICAL OFFICE
Hennepin County Public Works
Department of Environment and Energy
701 Fourth Ave. South, Suite 700
Minneapolis, MN 55415
PH: 612.348.7338
E-mail: james.kujawa@hennepin.us

Territorial Woods **Maple Grove, Project #2017-016**

Project Overview: This is 3 existing parcels, totaling 21 acres, located at 13763 and 14033 Territorial Road in Maple Grove. The north property line is Territorial Road and the south line is County Road 81. The Elm Creek Park Reserve is across Territorial Road from this site. The development is proposing to construct a 98 unit apartment building and 69 townhome units. Our review will be for compliance to the Commission's Rule D (Stormwater management), Rule E (Erosion and Sediment Control), and Rule I, (Buffers).

Applicant: Trident Development LLC, 3601 18th St. South, St. Cloud, MN 56301. Phone: 320-258-4438. Email: rogerf@tridentdevelopmentmn.com

Agent/Engineer: Carlson McCain Inc, Attn. Joe Radach, 3890 Pheasant Ridge Drive, NE, Blaine, MN 55449. Phone: 763-489-7900. Email: jradach@carlsonmccain.com

Exhibits:

- 1) ECWMC Request for Plan Review and Approval and Project fee of \$2,100, received May, 9, 2017. \$49 received August 11, 2017.
- 2) July 18, 2017 Email extension from applicant to the project review deadline.
- 3) Territorial Woods Preliminary Plat, Page 1 of 3 dated 4/28/17
- 4) Territorial Woods Existing Conditions, Page 2 of 3 dated 4/28/17.
- 5) Territorial Woods Grading, Drainage and Erosion Control Plan dated 8/11/17
 - a. Sheet C1, Title Sheet
 - b. Sheet C2, Existing Conditions and Removal Plan
 - c. Sheets C3 to C3.3, Grading, Drainage, & Erosion Control Plan Sheets C4 to C4.3,
 - d. Sheets C4 & C4.1, Stormwater Pollution Prevention Plan
 - e. Sheet C5, Tree preservation Plan
 - f. Sheets C6 & C7, Details
- 6) Territorial Woods Stormwater Management Plan dated April 28, 2017, revised August 11, 2017. Updated P8 and nutrient load calculations received August 25, 2017.

Findings:

- 1) A complete site plan was received May 9, 2017. The initial 60-day review period for decision, per MN Statute 15.99, expired on July 8, 2017. The applicant requested and received an extension to the deadline on July 18, 2017. The new deadline for a decision, as requested will be September 10, 2017.

- 2) This site drains south to a small creek system that flows east approximately 3,400 feet before entering Elm Creek. Pre and post development drainage patterns are essentially the same.
- 3) 65.6 acres north of Territorial Road drains to an 18" culvert on the north side of Territorial Road. This project will route the water through it in a bypass pipe.

Stormwater Management

- 4) Two ponding/filtration basins will be used to manage stormwater from the new site development.
- 5) Existing impervious area is 0.675 acres. New impervious area will be 8.432 acres for a net increase of 7.75 acres.
- 6) Rate controls meet the Commission's flow requirements. Rates before and after construction are as follows:

	2-yr (cfs)	10-yr (cfs)	100-yr (cfs)
Pre-Development Rates	13.4	30.3	67.2
Post-Development Rates	8.2	22.4	59.6

- 7) Per ECWMC pre-development phosphorus load guidelines, pre-development phosphorus loads are 6.7 lbs/year and post development loads are 4.7 lbs/year. This will meet the Commission's standards.
- 8) Pre-development TSS load= 13,346 lbs/year. Post-development TSS load = 5,191 lbs per year. This will meet the Commission's standards
- 9) Abstraction volume required for 1.1" of runoff over new impervious area will be;
 $7.6 \times 1.1 / 12 \times 43,560 = 30,350$ cubic feet (0.7 ac. ft.).
 - a. Filtration volume available in two sand filter ponds = 0.725 acre feet
 - b. Draw down for both ponds will be less than 48 hours.


Condition (based on 17.0 acres)	TP Load (lbs/yr)	TSS Load (lbs/yr)	Abstraction (cu. ft.)	Filtration (cu. ft.)	Annual Volume (ac. ft.)
Pre-development (baseline)	6.7	1,335	N/A		11.9
Post-development without BMPs	20.2	6,241	30,350	0	24.0
Post-development with BMPs	4.7	519		31,581	0
Net Change	-2.0	-816	+30,350	31,581	+12.1

- 10) The entity responsible for the long term operation and maintenance of the ponds and filter basins must be identified. If it is the City of Maple Grove, an email to that effect must be provided to the Commission. If not, an O & M plan agreement between the City and the property owner must be approved by the Commission and recorded on the property title within 90 days of final plat approval.
- 11) Wetland buffers meet the Commission's standards of 10' minimum/25' average on this site. Actual required = 30,840 sq. ft. vs 31,040 provided.
- 12) SWPPP plan identifies this site as draining to Rush Creek. It actually drains to Elm Creek, south and east of the project.
- 13) Erosion and sediment control plans meet the Commission's standards.

Recommendation: Approval Contingent upon;

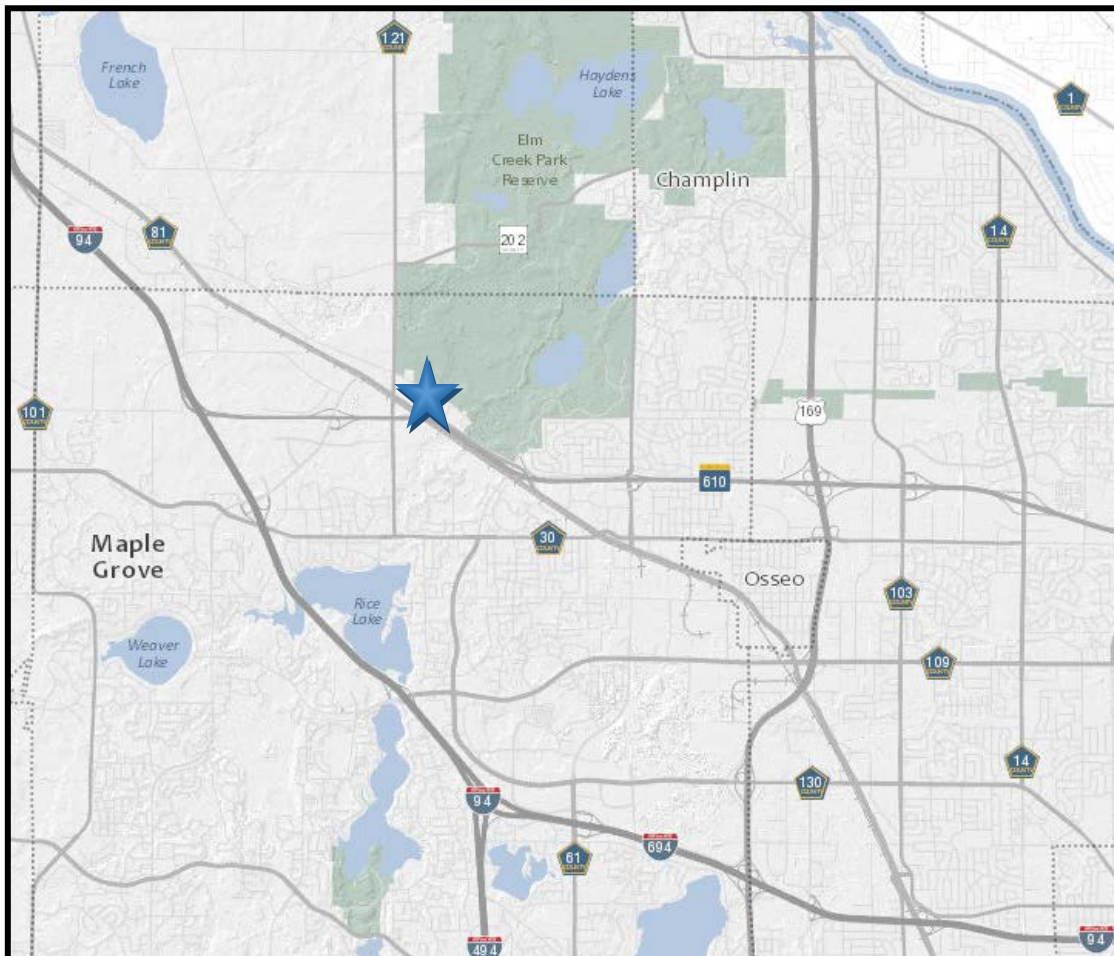
- **Pond and filter basin O&M responsibility must be identified. If it is the landowner's responsibility an O & M plan agreement between the City and the property owner must be approved by the Commission and recorded on the property title within 90 days of final plat approval.**

Hennepin County
Department of Environment and Energy
Advisor to the Commission

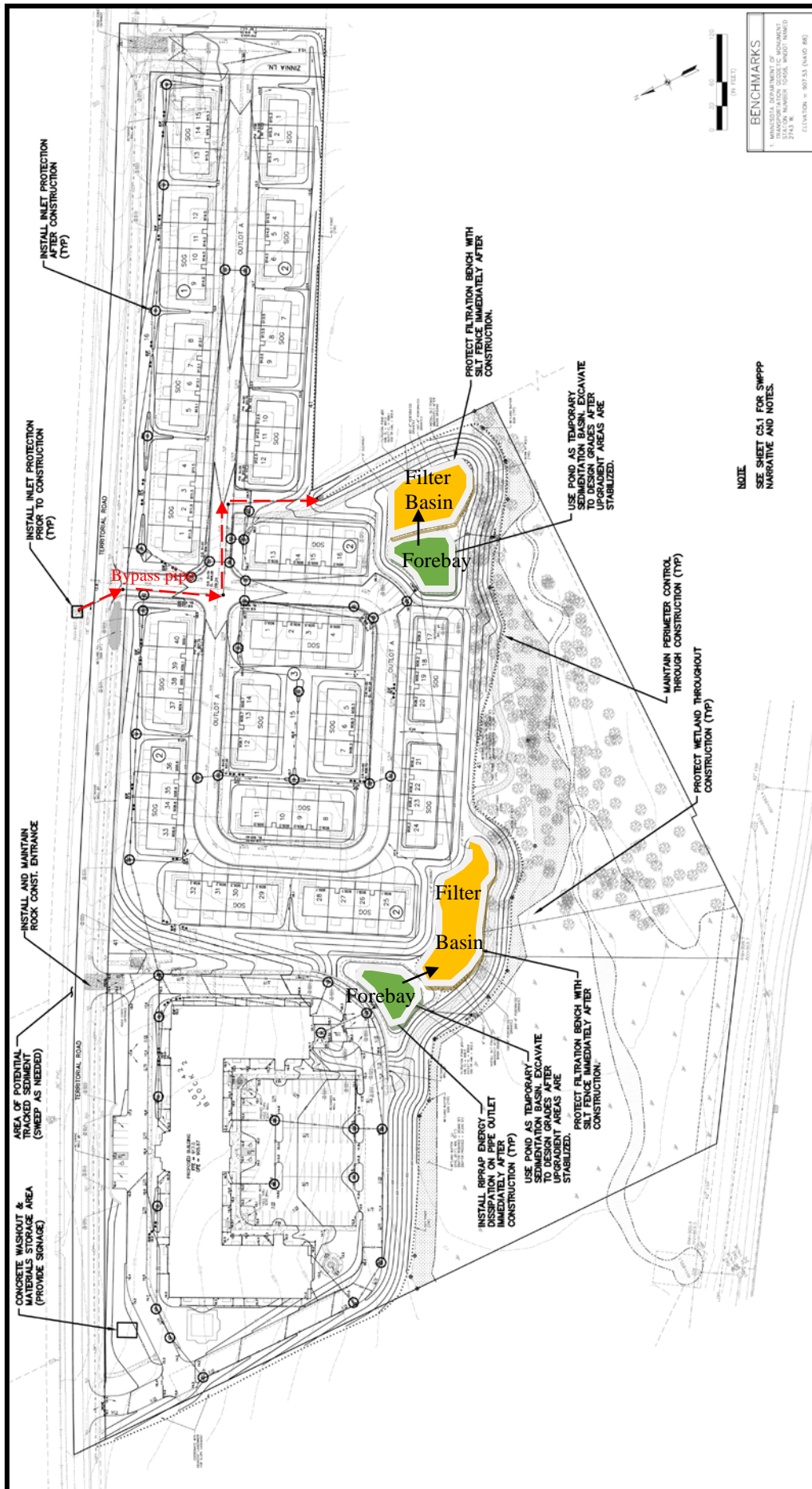

James C. Kujawa

August 25, 2017
Date

Location Map







elm creek

Watershed Management Commission

Item 5a_ab

ADMINISTRATIVE OFFICE
3235 Fernbrook Lane
Plymouth, MN 55447
PH: 763.553.1144
E-mail: judie@jass.biz
www.elmcreekwatershed.org

TECHNICAL OFFICE
Hennepin County Public Works
Department of Environment and Energy
701 Fourth Ave. South, Suite 700
Minneapolis, MN 55415
PH: 612.596.1171
E-mail: jason.swenson@hennepin.us

Medina Senior Living Facility **Medina, Project #2017-019**

Project Overview: The 10.8-acre commercial project site is located north of Highway 55, south of Chippewa Drive and midway between Willow Drive and Mohawk Drive. The site is currently vacant and covered by forested lands and a cattail marsh wetland is located in the central portion of the site running in an east-west direction. The proposed project is 6.00 acres, with 3.36 acres of impervious surface and will include two new main building structures, an accessory structure, and paved parking and driveway access to Chippewa Road. The remaining approximately 3.5 acres on the north side of the site will be platted for future development and is not subject to the Elm Creek Watershed Commission review now. Our review will be for compliance to the Commission's 3rd generation standards and rules.

Applicant: Lunski Inc. – c/o Dean Lunski, 1416 Main Street, Hopkins, MN 55343. Phone: 952-929-3400. Email: dlunski@psidb.com

Agent/Engineer: Hill Engineering, Inc. – c/o Jay Hill, P.E., 1585 Dunlap Street North, Saint Paul, MN 55108. Phone: 612-987-4455. Email: hilleng@gmail.com

Exhibits:

- 1) ECWMC Request for Plan Review and Approval received May 31, 2017 (City authorization is June 1, 2017).
- 2) Project review fee of \$2,750 on May 31, 2017.
- 3) Complete plan was received on June 20, 2017.
- 4) Medina Senior Living Community Preliminary Plat (dated August 28, 2017)
- 5) Medina Senior Living Community, Site Plan Review Submittal (dated August 28, 2017)
 - CS.....Cover Sheet
 - A-SITE..Architectural Site Plan
 - C1.0.....Existing Conditions
 - C2.0.....Tree Survey
 - C3.0.....Site Plan
 - C4.0.....Grading Plan
 - C5.0.....Utility Plan
 - C6.0-6.2.Civil Details
 - C7.0.....SWPPP

C7.1Erosion Control Plan
L1.0-2.0.Landscaping Plan

- 6) Stormwater Design Report, dated August 28, 2017.
- 7) Joint Application Form for Wetland Impacts, August 30, 2017
- 8) Purchase Agreement for Wetland Bank Credits, August 30, 2017

Findings:

- 9) A complete application was received on June 20, 2017. The initial 60-day review period would have expired August 19, 2017. The review period has been extended an additional 60 days by ECWMC and expires on October 18, 2017.
- 10) The entire site will be routed to the existing wetland located in the center of the property. The wetland discharges through a 15" Culvert to the south into the Highway 55 Right of Way, then south under Highway 55 and through neighboring properties before discharging into the series of wetlands and ditches south of Highway 55 eventually flowing north into Rush Creek.
- 11) Rule F. Floodplain Alteration does not pertain to this project. There are no established FEMA or ECWMC flood plains within the project corridor.
- 12) Rule G. Wetland Alteration. City of Medina is the Local Government Unit administering the Wetland Conservation Act of Minnesota. A wetland delineation has been completed and approved by the LGU. The applicant proposes impacts to 2,360 square feet of wetlands to complete the project.

The impacts are caused by placement of fill for road fill and sidewalk fill. The fill is required to provide access to the site from the north, as no access will be allowed onto Highway 55. The applicant has worked with the LGU and ECWMC staff through the WCA process to minimize the proposed impacts to what is currently proposed.

The applicant is proposing to purchase banking credits to mitigate the proposed impacts. Credits are proposed to be purchased from the Soberg wetland bank in Hennepin County, roughly 1 ½ miles west of the proposed impacts.

- 13) Rule I. Buffer requirements. Buffers are required to be an average of 25 feet wide, with a minimum width of 10 feet. The applicant is meeting the City of Medina's requirement for buffers at the location of the proposed wetland impacts, and per ECWMC rules, the buffer provided in this location is acceptable. Information required to meet the Commission's requirements as follows:
 - a. A Conservation easement, in a form acceptable to the ECWMC, shall be prepared and recorded by the applicant for the proposed wetland buffers on the site.
 - b. A buffer maintenance plan, in a form acceptable to the ECWMC, is required.
- 14) Rule E. Erosion and Sediment Control will meet the Commission's requirements with minor revisions:

- a) A final plan, dated and signed by a Professional Engineer licensed in Minnesota, must be submitted to the Commission and the City of Medina.

15) Rule D. Stormwater Management will be provided by two proposed ponds and filtration feature (rain garden).

Runoff from the parking areas is routed through pervious parking areas and then also is directed to the south stormwater pond. Runoff from the entrance access and some trails is proposed to be directed to the northern stormwater pond. A rain water garden is also proposed for the site that will provide treatment for runoff from some of the proposed trails only.

Again, it should be noted that the stormwater calculations do not appear to take into account any further expansion on the north side of the site at this time outside of the proposed access drive.

- a. The southern pond outlet will be equipped with a skimmer structure and discharges through a 10" outlet pipe at 991.0' in elevation.
- b. The northern pond will discharge through a 12" outlet pipe at 992.0' in elevation through a skimmer structure.

16) Stormwater rate control.

The post-development stormwater runoff rates for the 2-, 10- and 100-year events meet the standards as presently modeled and are shown below:

Storm Event	Existing Discharge Rate (cfs)	Proposed Discharge Rate (cfs)
2-year	2.61	0.73
10-year	5.10	1.46
100-year	10.97	3.30

17) Volume analysis:

The volume abstraction requirement for 1.1" of runoff from 3.36 acres of new impervious surface is about 13,441 cubic feet.

The applicant notes that soils are not conducive for infiltration. The applicant is proposing to build three separate areas of parking with pervious pavement and storage provided under the pavement with drain tile outlets. One of these areas, plus the rain garden, will require a liner due to a lack of 3 feet of separation from the groundwater level.

Abstraction Credit Summary

BMP	BMP Description	Area (square feet)	Abstraction Credit / Requirement (cubic feet)
Parking Lot Infiltration	Infiltration	NA	4,521
Parking Lot Biofiltration	Biofiltration	NA	4,722
Irrigation Reuse	Stormwater Reuse	NA	62,309
Wetland Buffer	Wetland Buffer Oversizing	26,300	563
Total Site BMP Credits		NA	72,115
Total Site Abstraction Requirement	New Impervious Coverage	146,360	13,441

- 1) See RWMWD Reuse Calculator Results for irrigation reuse
- 2) 50% credit taken for biofiltration

- a. Provide a figure showing the area to be irrigated on the site to verify the 2.5 acres of irrigation proposed is feasible and reasonable.

18) Water quality and nutrient analysis:

Water Quality (Nutrient and TSS) and Runoff Volume Summary				
Development Name: Medina Senior Living Facility Total Parcel Area: 10 acres Total Lot Area: 10 acres Total Buildable Area:..... 6 acres Total Impervious Area: 3.36 Acres Review Month/Year: September 2017 Nearest Downstream Surface Water: Rush Creek is located downstream of the site to the north.				
Condition	TP Load (lbs./yr)¹	TSS Load (lbs./yr)¹	Abstraction Volume Credit (cubic feet)²	Filtered Volume Credit (cubic feet)²
Pre-development (baseline) Load	1.90	Not Provided	67,393	4,722
Post-development Without Mitigation	11.1	2018		
Post-development With Mitigation	6.7	1161		
Net Change ("baseline" compared to "post-development with mitigation")				

¹Average annual values

²See Abstraction Credit Summary Table.

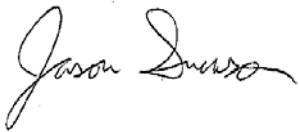
- a. The model results do not show the site meeting the requirement for no annual increase in total phosphorus discharge rates. Staff believes the BMP's proposed are reasonable to meet this requirement, and asks that the applicant provide their actual model file for mids – not just the model output file, to verify this assumption.
- 19) At the time of writing this report, it was not certain which party (City of Medina or the applicant) would be responsible for the operation and maintenance of the stormwater management facilities. A responsible party must be established for the O&M Plan.

Recommendation:

Staff recommends conditional approval of the project, subject to the following conditions:

Provide the revisions and information requested under items 13a, 13b, 14a, 17a, 18a, and 19.

Hennepin County
Department of Environment and Energy



September 6, 2017

Jason Swenson, P.E.
Technical Advisor to the Commission

SITE LOCATION



AERIAL PHOTO



GRADING PLAN



Minnesota Wetland Conservation Act

Notice of Decision

Item 12 ao

Local Government Unit (LGU) Elm Creek Watershed Management Commission	Address 3235 Fernbrook Ln N, Plymouth, MN 55447
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1. PROJECT INFORMATION

Applicant Name E&R Investments, LLC	Project Name Rachel Development	Date of Application July 26, 2017	Application Number 2017-032W
<input checked="" type="checkbox"/> Attach site locator map.			

Type of Decision:

<input checked="" type="checkbox"/> Wetland Boundary or Type	<input type="checkbox"/> No-Loss	<input type="checkbox"/> Exemption	<input type="checkbox"/> Sequencing
<input type="checkbox"/> Replacement Plan	<input type="checkbox"/> Banking Plan		

Technical Evaluation Panel Findings and Recommendation (if any):

<input type="checkbox"/> Approve	<input type="checkbox"/> Approve with conditions	<input type="checkbox"/> Deny
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2. LOCAL GOVERNMENT UNIT DECISION


Date of Decision: September 1, 2017		
<input checked="" type="checkbox"/> Approved	<input type="checkbox"/> Approved with conditions (include below)	<input type="checkbox"/> Denied

LGU Findings and Conclusions (attach additional sheets as necessary):

An assessment of the presence and extent of wetlands for the Rachel Development, Corcoran project was completed on July 14, 2017 by HAA Inc... The project is located in the City of Corcoran, Hennepin County, Minnesota within Section 25, Township 119, Range 23. The project area is defined as the parcel boundaries of PIDs 251192344002 and 2511923440003, which correspond to the addresses 19235 Co Rd 10 and 19219 Co Rd 10, respectively. Two wetlands were identified and delineated on this site. Wetland A was delineated as a type 4 wetland, approximately 0.05 ac in size. It appears to be a dug out pond. Wetland B was delineated as a type 2/7 wet meadow/forested wetland approximately 15.0 acres in size. The LGU finds the delineation reports methods and results consistent with acceptable delineation standards as published and amended by the Army Corp of Engineers and hereby approves said delineation report.

Wetlands may not be impacted until all applicable conditions have been met!

LGU Authorized Signature:

Signing and mailing of this completed form to the appropriate recipients in accordance with 8420.0255, Subp. 5 provides notice that a decision was made by the LGU under the Wetland Conservation Act as specified above. If additional details on the decision exist, they have been provided to the landowner and are available from the LGU upon request.		
Name James C Kujawa	Title Technical Advisor to the LGU	
Signature 	Date September 1, 2017.	Phone Number and E-mail 612-348-7338 James.Kujawa@hennepin.us

THIS DECISION ONLY APPLIES TO THE MINNESOTA WETLAND CONSERVATION ACT. Item 12 ao
Additional approvals or permits from local, state, and federal agencies may be required. Check with all appropriate authorities before commencing work in or near wetlands.

Applicants proceed at their own risk if work authorized by this decision is started before the time period for appeal (30 days) has expired. If this decision is reversed or revised under appeal, the applicant may be responsible for restoring or replacing all wetland impacts.

This decision is valid for three years from the date of decision unless a longer period is advised by the TEP and specified in this notice of decision.

3. APPEAL OF THIS DECISION

Pursuant to MN Rule 8420.0905, any appeal of this decision can only be commenced by mailing a petition for appeal, including applicable fee, within thirty (30) calendar days of the date of the mailing of this Notice to the following as indicated:

Check one:

<input checked="" type="checkbox"/> Appeal of an LGU staff decision. Send petition and \$0 fee (if applicable) to: Elm Creek Watershed Management Commission 3235 Fernbrook Ln N Plymouth, MN 55447	<input type="checkbox"/> Appeal of LGU governing body decision. Send petition and \$500 filing fee to: Executive Director Minnesota Board of Water and Soil Resources 520 Lafayette Road North St. Paul, MN 55155
---	---

4. LIST OF ADDRESSEES

<input checked="" type="checkbox"/> SWCD TEP member: Stacey Lijewski (email only: Stacey.Lijewski@hennepin.us) <input checked="" type="checkbox"/> BWSR TEP member: Ben Meyer (email only: ben.meyer@state.mn.us) <input type="checkbox"/> LGU TEP member (if different than LGU Contact): <input type="checkbox"/> DNR TEP member: Kate Drewry: kate.drewry@state.mn.us <input checked="" type="checkbox"/> DNR Regional Office (if different than DNR TEP member) Becky Horton (DNR) (email only: Becky.Horton@state.mn.us) <input type="checkbox"/> WD or WMO (if applicable): <input checked="" type="checkbox"/> Applicant and Landowner (if different) ghayes@evertconst.com , Kacif@has.com <input type="checkbox"/> Members of the public who requested notice: City of Corcoran, Kevin Mattson kmattson@ci.corcoran.mn.us (notice only) <input checked="" type="checkbox"/> Corps of Engineers Project Manager: Mellissa Jenny (email only: Melissa.M.Jenny@usace.army.mil) <input type="checkbox"/> BWSR Wetland Bank Coordinator (wetland bank plan decisions only)

6. ATTACHMENTS

In addition to the site locator map, list any other attachments: <input checked="" type="checkbox"/> Rachel Development delineation report dated July 24, 2017 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
--

elm creek

Watershed Management Commission

Item 5a_aq

ADMINISTRATIVE OFFICE
3235 Fernbrook Lane
Plymouth, MN 55447
PH: 763.553.1144
E-mail: judie@jass.biz
www.elmcreekwatershed.org

TECHNICAL OFFICE
Hennepin County Public Works
Department of Environment and Energy
701 Fourth Ave. South, Suite 700
Minneapolis, MN 55415
PH: 612.596.1171
E-mail: jason.swenson@hennepin.us

Plymouth Memory Care **Plymouth, Project #2017-034**

Project Overview: Plymouth Memory Care is a proposed senior living facility located just west of the northwest corner of the intersection of County Road 101 and Medina Road in the City of Plymouth. The project is proposed to take place on 4.7 acres of land. There is currently one single family home located on the site, with the bulk of the site currently wooded or forested, and the remainder as maintained grass. The majority of the site (4.4 acres) will be disturbed for construction of the facility and associated parking and stormwater facilities. Our review will be for compliance to the Commission's 3rd generation standards and rules.

Applicant: Maco Holdings, c/o Josh Max, 15715 56th Avenue North, Plymouth, MN 55446. Phone: 612-655-8111. Email: macoholdings@outlook.com

Agent/Engineer: Civil Site Group, c/o David Knaeble, 4931 W. 35th Street #200, St. Louis Park, MN 55416. Phone: 763-234-7523. Email: dknaeble@civilsitegroup.com

Exhibits:

- 1) ECWMC Request for Plan Review and Approval received 8/11/2017
- 2) Project review fee of \$1,225 on August 11, 2017.
- 3) Complete plan was received on August 11, 2017.
- 4) Plymouth Memory Care City Submittal (dated August 8, 2017)

C0.0.....Cover Sheet

C1.0.....Removals Plan

C2.0.....Site Plan

C2.1.....Site Plan Enlargements

C3.0.....Grading Plan

C4.0.....Utility Plan

C4.1.....Sanitary Sewer Connection

C5.0-5.3.Civil Details

L1.0.....Landscape Plan

L1.1.....Landscape Plan Details and Enlargements

SW1.0...SWPPP – Existing Conditions

SW1.1...SWPPP-Proposed Conditions

SW1.2...SWPPP-Details

SW1.3...SWPPP-Narrative
SW1.4...SWPPP-Attachments
SW1.5...SWPPP-Attachments

- 5) Preliminary Storm Water Management Plan, dated July 28, 2017

Findings:

- 6) A complete application was received on August 11, 2017. The initial 60-day review period expires October 10, 2017.
- 7) The site drains to the east via a storm sewer located in Medina Road and is located in the far southern end of the watershed. Eventually, stormwater from this area flows north under Highway 55 and to Elm Creek upstream of Rice Lake.
- 8) Stormwater treatment will be provided in one biofiltration basin proposed for the western portion of the site. See Rule D below.
- 9) To provide the required stormwater treatment for rate, quality and volume the applicant is proposing to use one biofiltration pond that satisfies all three criteria.
- 10) Rule F. Floodplains. There are no mapped floodplains on the site so Rule F does not apply to this project.
- 11) Rule G. Wetland Alteration. There are no wetlands on the site and no wetland impacts are proposed. So Rule G does not apply to this project.
- 12) Rule I. Buffer requirements. As there are no wetlands on the site, Rule I also does not apply to this project.
- 13) Rule E. Erosion and Sediment Control meets the Commission's requirements as proposed. The applicant is using a combination of BMP's such as silt fence, bio rolls, construction entrances, and inlet protection that meets both ECWMC's standards and the Minnesota NPDES Construction Stormwater permit.
- 14) Rule D. Stormwater management will be provided by one biofiltration basin proposed for the western portion of the site. The basin is proposed to be an aboveground facility with draitile and iron filing to enhance soluble phosphorus are included.. Due to shallow groundwater conditions, a liner is required to provide the separation from groundwater and this make the draitile necessary. The basin will also function to provide rate control for runoff from the site.
- 15) The proposed biofiltration outlet is a combination of 6" draitile located in the engineered soils proposed for the basin with an overflow into the manhole structure. The basin is proposed to have a bottom surface elevation of 1007.0 feet, and a 100 year high water level of 1010.82. An emergency overflow to the west is also provided.

- 16) Water quality and nutrient analysis: The existing total phosphorus (TP) and total suspended sediment (TSS) loads from the site are 1.7 and 385 pounds per year, respectively. The post-development consolidated TP and TSS loads are 1.3 and 320 pounds/year, respectively. Loads were estimated using the MIDS calculator to incorporate removals from the enhanced iron filing system proposed as part of the biofiltration. The water quality treatment plan meets the Commission's standards.
- 17) The abstraction requirement for 1.8 acres of new impervious cover is 0.165 acre-feet. The project is proposing to use biofiltration in the basin located in the western portion of the site to meet this requirement. The proposed volume is 0.189 acre-feet, exceeding ECWMC requirements.
- 18) Stormwater rate control. The post-development stormwater runoff rates for the 2-, 10- and 100-year events meet the standards as presently modeled and are shown below:

Drainage Area	2-year Flow Rate (cfs)		10-year Flow Rate (cfs)		100-year flow rate (cfs)	
	Existing	Proposed	Existing	Proposed	Existing	Proposed
Overall Site	5.08	1.61	11.33	7.16	26.73	10.03

19) Stormwater Management Plan Summary:

Water Quality (Nutrient and TSS) and Runoff Volume Summary				
Development Name: Plymouth Memory Care Total Parcel Area: 4.7 acres Total Lot Area: 4.7 acres Total Buildable Area:..... 4.7 acres Total Impervious Area: 1.8 acres Review Month/Year: August 2017 Nearest Downstream Surface Water: Elm Creek, draining to Rice Lake is located downstream of this project.				
Condition	TP Load (lbs./yr) ¹	TSS Load (lbs./yr) ¹	Abstraction Volume Credit (ac-ft)	Filtered Volume Credit (ac-ft)
Pre-development (baseline) Load	1.7	385	0	0.189
Post-development Without Mitigation	4.2	769		
Post-development With Mitigation	1.3	320		
Net Change ("baseline" compared to "post-development with mitigation")	-0.4	-65		

¹Average annual values

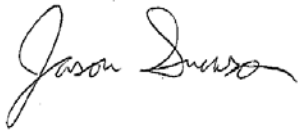
20.) At the time of writing this report, it was not certain which party ((City of Plymouth) or the applicant) would be responsible for the operation and maintenance of the stormwater management facilities. A responsible party must be established for the O&M Plan.

Recommendation:

Staff recommends the approval of the project with the following conditions:

- **Provide revisions required under item #20.**

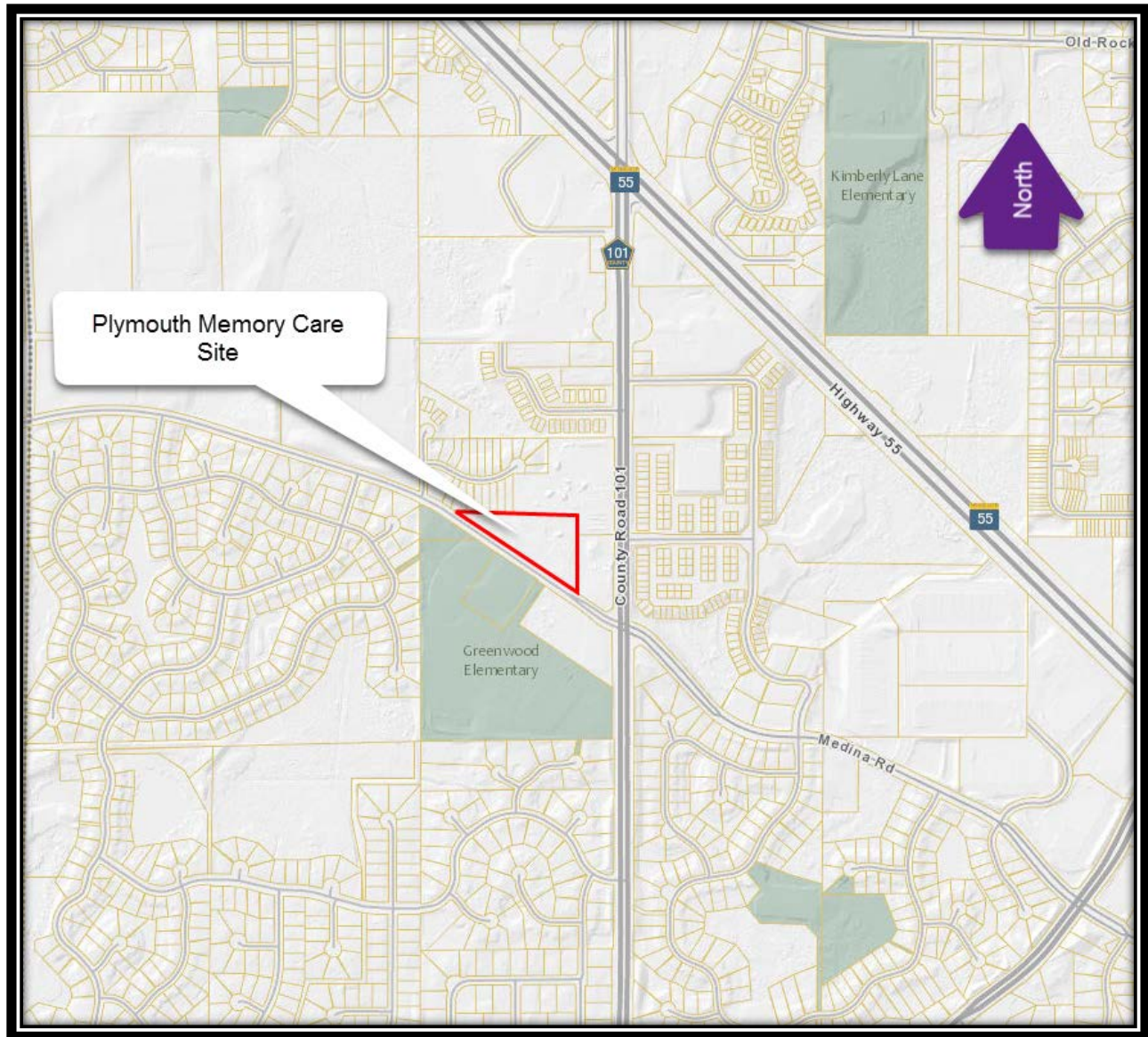
Hennepin County
Department of Environment and Energy



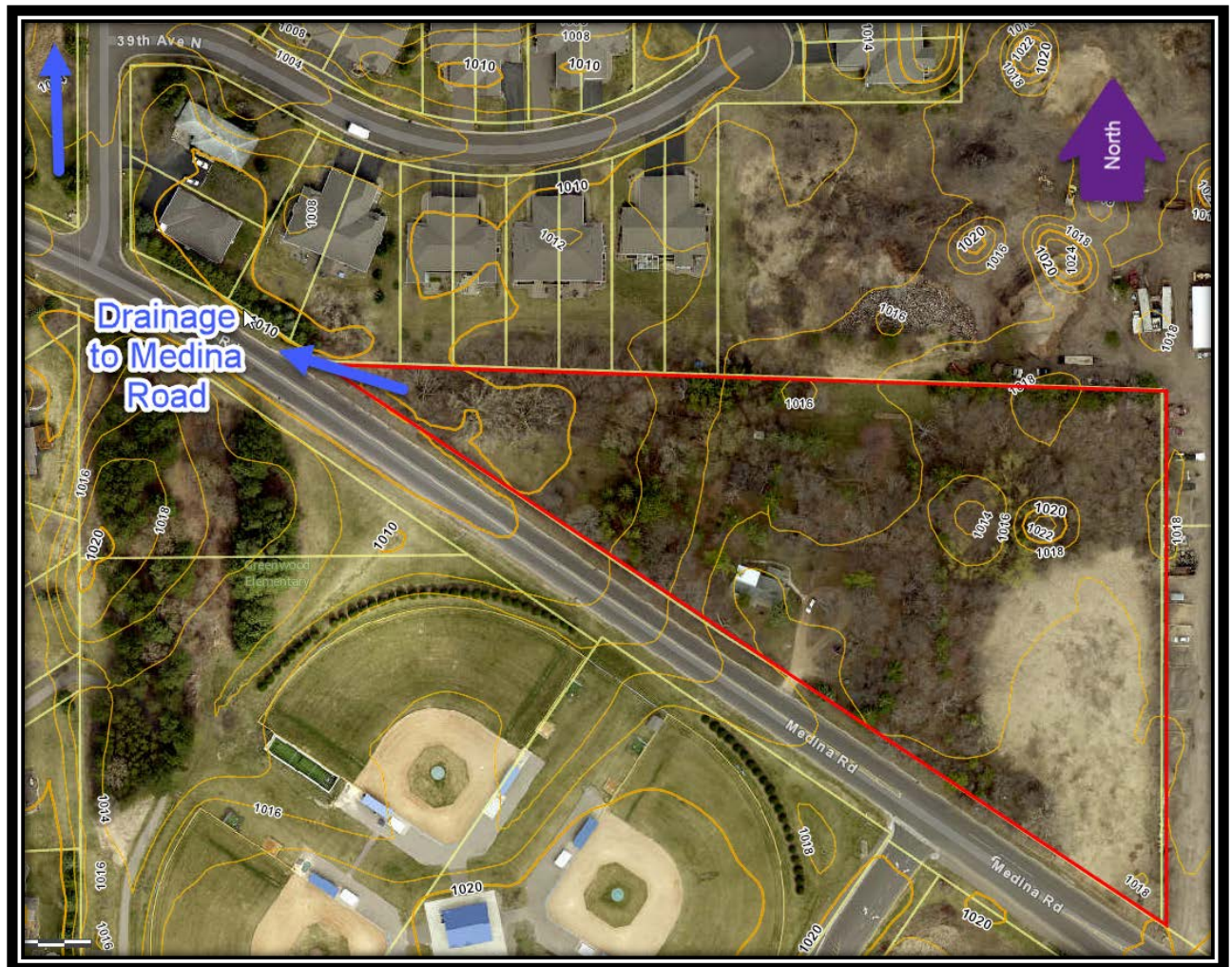
August 30, 2017

Jason Swenson, P.E.
Technical Advisor to the Commission

SITE LOCATION



AERIAL PHOTO



EROSION CONTROL NOTES:

- THIS PROJECT IS GREATER THAN ONE ACRE AND WILL REQUIRE AN EROSION CONTROL PLAN FOR CONSTRUCTION PERMIT. IT IS ALSO REQUIRED FROM THE CITY OF PLYMOUTH.
- SEE SHEETS SWP-1, SWP-2 FOR ALL EROSION CONTROL NOTES, REQUIREMENTS, AND PRACTICES.
- SEE GRADING PLAN FOR ADDITIONAL EROSION AND EROSION CONTROL NOTES.
- CONTRACTOR IS RESPONSIBLE FOR SHARP IMPLEMENTATION, INSPECTION, AND COMPLIANCE WITH ALL APPLICABLE PERMITS.

CITY OF PLYMOUTH EROSION CONTROL NOTES:

- RESISTED FOR CITY SPECIFIC EROSION CONTROL NOTES.

SWAMP EROSION CONTROL NOTES:

- CONTRACTOR TO PROVIDE BUILT PROTECTION AT ALL CATCH BASINS.
- CONTRACTOR TO PROVIDE PERIMETER EROSION CONTROL LOCATED AT CONSTRUCTION UNITS, TYP.
- CONCRETE WALKOUT AREA, FINAL LOCATION TO BE COORDINATED BY CONTRACTOR AND APPROVED BY CITY.
- CONTRACTOR TO PROVIDE BUILT PROTECTION AT ALL CATCH BASINS.

LEGEND:

- 1" = 10' (SEE SHEET SWP-1)
- 1" = 10' (SEE SHEET SWP-2)
- 1" = 10' (SEE SHEET SWP-3)
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- 1" = 10' (SEE SHEET SWP-69)
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- 1" = 10' (SEE SHEET SWP-99)
- 1" = 10' (SEE SHEET SWP-100)